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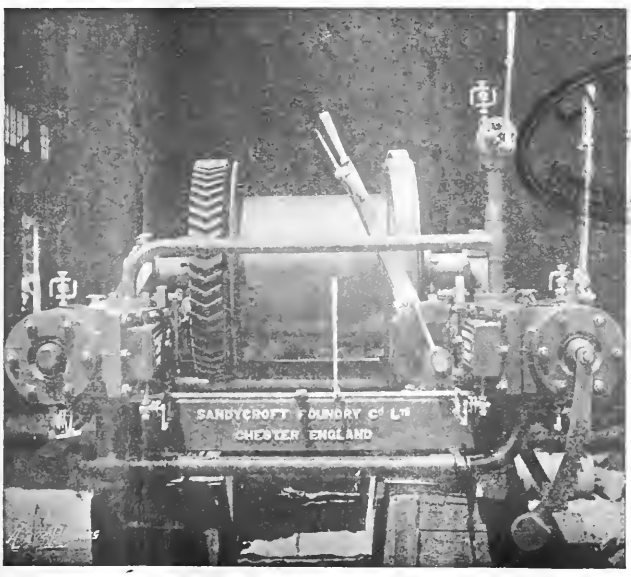

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A DIVIDEND of 8½ per cent. (1/9 per share) has been declared by the Board for the period ending 31st July, 1916, payable to Shareholders registered in the books of the Company at the close of business on 31st July, 1916.

The Transfer Books will be closed from the 1st to the 7th of August, 1916, both days inclusive.

It is hoped that Warrants in payment of this Dividend will be despatched on or about 4th September, 1916. Those despatched from the London Office to persons resident in the United Kingdom will be subject to a deduction of English Income Tax.

By Order of the Board,

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W. E. S. LEWIS,
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24th July, 1916.

"THE JUMPERS" GOLD MINING COMPANY, LIMITED.

(IN LIQUIDATION)

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NOTICE TO SHAREHOLDERS.

NOTICE IS HEREBY GIVEN, in pursuance of Section 169 of the Transvaal Companies Act, 1909, that a General Meeting of the Members of the above-named Company will be held in the Board Room, Exploration Buildings, Commissioner Street, Johannesburg, on Thursday, the 31st day of August, 1916, at 4 o'clock in the afternoon, for the purpose of having an account laid before them showing how the winding up has been conducted and the property of the Company disposed of, and of hearing any explanation that may be given by the Liquidators.

Dated the 17th day of July, 1916.

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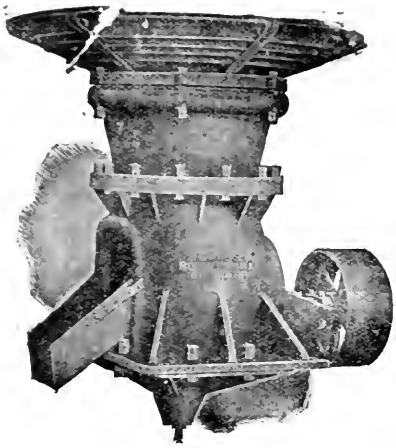

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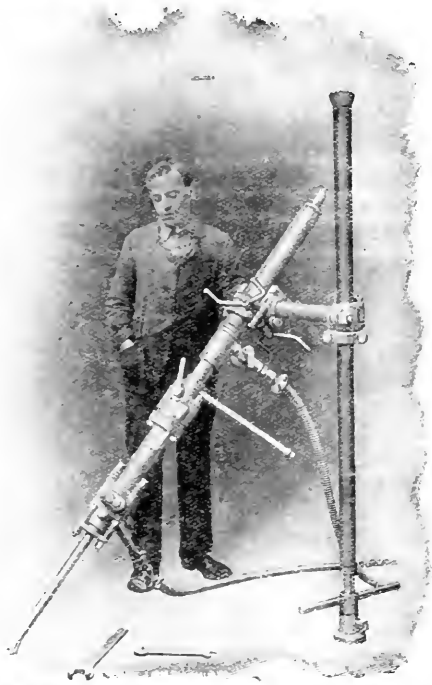

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South African Mines, Commerce and Industries.

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NOTICE.—The postage of this issue of the *S.A. Mining Journal* is: South Africa, 1d. All other parts, 1½d.

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Notes and News.

Position of the Diamond Trade.

Conditions created by the war, and especially by recent happenings, have not been of a character to stimulate dealings in luxuries, says the "Financial News." Quite the reverse, in fact, is the case; and owing to uncertainties in the international position, especially where the United States is concerned, the tendency of prominent interests in the diamond trade has been to contract business. No amelioration of the condition of the market can therefore be chronicled, and the quietness which prevailed a week ago still exists. Hopes which were founded upon vigorous dealings on the part of American merchants have been shattered, as in circumstances such as those which now overshadow the position possessors of capital are evincing a disposition to postpone the acquisition of gems which will be available at a later date on virtually identical terms. The Diamond Syndicate have this week shown Dutoitspan goods, and, we are informed, have sold fairly well; but the rush of the last few months is no longer discernible. Simultaneously with active American buying was the creation of a strong inquiry in the Far East. But dealers in that part of the world, too, have fallen into line, and a considerable diminution in the sales of brilliants there has recently taken place.

* * * *

Antelope Gold Mine (Rhodesia).

The report of the Antelope for 1915 states that the profits, £19,877, have been utilised for paying off the loan from the Gold Fields Rhodesian Development Co., Ltd., which has been reduced from £40,500 to £21,000 for capital expenditure and for accumulation of a stock of stores in view of rising prices. The directors regret they are unable to recommend a dividend. A report by Mr. H. A. Piper, consulting engineer to the Gold Fields Rhodesian Development Co., Ltd., on the operations during the past year states that the satisfactory developments at the lowest level of the mine, referred to in last year's report, have continued, the values at the 12th level being the highest so far obtained, and have enabled the engineers to bring 13,045 tons of ore, valued at 12.6 dwt., into the ore reserves from this level, with the prospect of a further addition during the current year. In view of the satisfactory developments at the deepest level, the engineers, since the date of the report, have strongly recommended the sinking of the main shaft at the 14th level, and the necessary authority has been given. Mr. Piper states that the ore reserves at Dec. 31 stood at 110,157 tons, valued at 9.47 dwt., a decrease on last year's figures of 24,340 tons and 0.11 dwt. in value. The reduction plant generally has run well. Results of operations: Tonnage crushed, 47,858 tons; average value per ton, 11.26 dwt.; recovery from mill, 12,087.43 oz.; recovery from cyanide, 12,305.78 oz.—24,393.21 oz.; value of gold, £103,271 11s. 11d.; total working profit (including (£480 sundry revenue), £26,348 12s. 6d.; average value of residue, 0.75 dwt.; theoretical extraction, 93.28 p.c.; actual extraction, 90.47 p.c. The working costs amounted to 30s. 2.7d. per ton, including Government royalty of 2s. 1.4d., 32s. 4.1d. per ton, an increase over last year of 1s. 8d. per ton, due to development being charged at 1s. 4d. per ton, against 2s. 7d.

* * * *

Cold Stealing in Western Australia.

Speaking at the recent annual meeting of the Western Australian Chamber of Mines, Mr. R. S. Black made special reference to gold stealing from the mines. He said:—"We know that the mines are being systematically robbed year by year, and the chamber should not hesitate to express its views on the matter, and should urge and continue to urge on whatever government is in power that it should pass legislation so that the huge trade in illicit gold may be effectively checked. The amount of that trade is well known to the public, and if I mention that it amounts to something like

[illegible] year I do not think that [illegible] very far out [illegible] feel of public condemnation [illegible] raised against [illegible] trade. The experience [illegible] past has shown [illegible] difficult it is to obtain convictions under the law as [illegible] stands. Even those convicted and subject to its [illegible] comparatively penalties may be considered either extremely unlucky or extremely stupid. I have in the past [illegible] used for charging goldfields members of parliament [illegible] subject of the mining industry. I would now like to [illegible] to them where, in one direction at least, their [illegible] duty lies. Let them secure legislation such as has [illegible] force for some time in other States, and which has [illegible] approved of on, I think, two occasions for general [illegible] at a conference of Premiers, and which has certainly once been endorsed by our Premier. If such legislation were passed it would assist in bringing to account the thieves who have so long battened on this criminal trade, and so to the mines would be preserved a greater portion of what should be their own. I make these remarks because I think this illicit gold trade and the manner in which it is accepted as a matter of course by the community is one of the greatest blots on the goldfields and on the industry to-day."

* * * *

S.A. Oil and Fat Industries, Ltd.

The following interesting notice has been inserted by the South African Oil and Fat Industries, Limited, in the Durban papers:—"As our attention has been drawn to certain abusive and misleading statements anonymously circulated, to the effect that our company is controlled by German interests, we wish to make it publicly known that there is not a single German shareholder in this company. Apart from a small number of shares held by individual Britishers, the bulk of the shares are held by the New Transvaal Chemical Co., which is a Scottish Company, formed in Glasgow, and has a capital of £500,000, out of which only 6,011 shares of £1 each are held by enemy subects, whose dividends, since the outbreak of war, have naturally been handed over to the Public Trustee. It will thus be seen that we have no German shareholders whatsoever, whilst practically 99 per cent. of the Shareholders of the New Transvaal Chemical Co., Ltd., are British and Allied Subjects, which we make bold to state is more than can be said of almost any other large manufacturing concern carrying on business in South Africa to-day. These facts will be no surprise to honest Britishers, but they may nail down the malicious lies of the individual who is at the bottom of this anonymous mischief, made for his own infamous purposes, and by no means in the public interest as would imply. In spite of this malevolent attempt to place Surprise Soap in public disfavour, we venture to predict that by virtue of its purity, excellence in dispensing with dirt of every description it will never cease to gain in popularity.

* * * *

The War and Trade Policy.

The Council of the London Chamber of Commerce in mail week adopted the report of the special committee appointed to consider problems connected with trade during and after the war. The committee have devoted their attention mainly to fiscal proposals, with the object of securing preferential reciprocal trading between all parts of the British Empire and between the Empire and its Allies, with favourable treatment for neutrals, and for regulating trade relations with enemy countries. Broadly speaking, the committee think this could all be done by tariffs better than by prohibition of imports from any country, which might prove unworkable in practice. The committee recommends a tentative tariff for consideration. This, they believe, will prove a useful basis for negotiations by the Government in the proper quarters. The suggested rates (which are subject to reservations and exceptions set out in the report) are as follow: Wholly manufactured goods, maximum 30 per cent. ad valorem; general, 20 per cent. ad valorem, minimum 10 per cent. ad valorem.; semi-manufactured goods and articles solely used as raw materials in industries, 15 per cent., 10 per cent. and 5 per cent.; manufactured foodstuffs, 7½ per cent., 5 per cent. and 2½ per cent.; foodstuffs, 5 per cent., 2½ per cent. and free; raw materials, free; articles such as wines, spirits, beer, tobacco, etc., existing war rates or modifications thereof during period of suggested tentative tariff, plus 50 per cent. for enemy countries. These proposals apply to (1) British Empire; (2) present Allies; (3) friendly neutrals; (4) other neutral countries; and (5) enemy countries, and the duties, other than raw materials (c), and present dutiable articles (f), might be allocated as follows: British Empire countries, minimum rates and free, less any percentage of duty these countries may accord as a preference to the Mother Country, present Allies, minimum rates and free; friendly neutrals (giving United Kingdom most favoured treatment), general rates; other neutral countries those giving preference to other foreign countries), general rates, plus surtax equal to preference given to other countries; enemy countries, maximum rates.

* * * *

Rhodesia Broken Hill.

In a circular letter to the shareholders of the Rhodesia Broken Hill Development Company, Ltd., the secretary, Mr. T. Donald, says: "I am directed to inform you that from June, 1915, up to the end of May, 1916, the small smelter at Broken Hill has produced 1,000 tons of lead. The board consider that the knowledge acquired of the property and of the methods necessary to successfully handle the proposition justify the enlargement of the plant as advocated by the consulting engineers, Messrs. Hooper, Speak and Co. Orders have been placed for the construction of two blast furnaces and other plant. Delivery of the machinery in England has commenced, and it is hoped that the whole plant will be delivered by the end of the month of August. The first unit is expected to be erected on the mine and running towards the end of this year, and the second unit about a month or two later. The total capacity of the new furnaces should be not less than 900 tons of lead per month. Financial arangements are in progress whereby the cost of this plant, estimated to amount to £30,000, and the company's present indebtedness of £26,000 shall be discharged."

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Scientific and Industrial Research.

The Standing Committee on Engineering appointed by the Advisory Council for Scientific and Industrial Research, held its first meeting in mail week. The Committee had been so constituted as to represent both the scientific and the industrial sides of engineering, and includes the following members nominated by the Professional Associations:—Institution of Civil Engineers, Sir Maurice Fitzmaurice, C.M.G.; Institution of Electrical Engineers, Mr. J. S. Highfield; Institution of Mechanical Engineers, Dr. Dugald Clerk, F.R.S.; Institution of Naval Architects, Sir Archibald Denny, Bart.; North-East Coast Institution of Engineers and Shipbuilders, Mr. Herbert Rowell; Manchester Association of Engineers, Mr. Alfred Saxon; Institution of Engineers and Shipbuilders in Scotland, Mr. James Brown; and the following members appointed directly by the Advisory Council: Mr. F. R. Davenport, Mr. Alfred Herbert, Professor Bertram Hopkinson, Mr. C. H. Merz, Mr. V. L. Raven, Mr. A. A. Remington, Mr. G. Gerald Stoney, F.R.S., Mr. Douglas Vickers, Professor Miles Walker. The Advisory Council has appointed Sir Maurice Fitzmaurice, C.M.G., chairman. The Committee was welcomed by Sir William M'Cormick, Chairman of the Advisory Council, and Dr. H. F. Heath, Administrative Secretary of the Council. Sir A. Selby-Bigge, Secretary to the Committee of the Privy Council for Scientific and Industrial Research, also attended, and emphasised the importance attached by the Government to the need for greatly increased activity in research in connection with industry. In Sir Maurice Fitzmaurice's opening statement as Chairman of the Standing Committee several important aspects of the Government scheme as issued in July, 1915, were referred to, and attention was directed in particular to the necessity for securing that British industries should get as large a share as possible of the full value of the results of any successful researches, and should retain at least the initial advantages derived from them. Sir Maurice felt in this con-

nection that the Committee would be in a position to advise the Government organisation for research as to the means of securing that its operations should yield the maximum benefits to the trade and industry of the Empire. Much time and money had been spent upon research in the works of individual firms, whose aggregate expenditure for the purpose far exceeded the sums at the disposal of the Committee of Council, and from the industrial side such work by firms appealed to him as the most hopeful arrangement. But the Government had made a decided step forward by showing their interest in industrial research, and though he expected much more from the scheme, the gain would be great if the only result were the training of research workers. Too much must, however, not be expected from research and experimental work in themselves, for these alone would not win back the industries which should never have left us, or even retain those we still possessed. Though it was not for the Standing Committee to deal with such questions, individual and combined efforts were needed to secure that the products of this country found their way to those who needed them at home and abroad, and to see that what was wanted was supplied by our industries. Sir Maurice Fitzmaurice hoped that it would be possible to co-operate with our fellow-countrymen beyond the seas in carrying out many useful investigations. The formation by the Advisory Council for Scientific and Industrial Research of a Standing Committee on Mining, constituted so as to represent both the scientific and industrial sides, has also been completed. The Standing Committee includes the following members nominated by Professional Associations:—Institution of Mining Engineers, Sir William Garforth, Dr. John Haldane, F.R.S., Dr. R. T. Moore, and Mr. Wallace Thorneycroft; Institution of Mining and Metallurgy, Mr. Edward Hooper and Mr. Edgar Taylor; Iron and Steel Institute, Professor H. Louis, the South Wales Institute of Engineers, Mr. W. Gascoyne Dalziel; and the following members appointed directly by the Advisory Council: Sir Hugh Bell, Bart., Mr. Hugh Bramwell, Lieut.-Colonel W. C. Blackett, Professor Cadman, Professor Frecheville, Mr. Bedford McNeill, Mr. Hugh F. Marriott, Sir Boverton Redwood, Bart., Mr. C. E. Rhodes. The Advisory Council has appointed Sir William Garforth chairman. The Committee is divided into two sections, as follows: Section on the Mining of Iron, Coal and Hydrocarbons.—Sir William Garforth (chairman), Sir Hugh Bell, Bart., Mr. Hugh Bramwell, Lieut.-Colonel. W. C. Blackett, Professor Cadman, Mr. W. Gascoyne Dalziel, Dr. John Haldane, Professor Louis, Dr. R. T. Moore, Sir Boverton Redwood, Bart., Mr. C .E. Rhodes, and Mr. Wallace Thorneycroft. Section on the Mining of Minerals other than Iron, Coal and Hydrocarbons.—Mr. Edgar Taylor (chairman), Sir Hugh Bell, Professor Frecheville, Mr. Edward Hooper, Professor Louis, Mr. Bedford McNeill, Mr. Hugh Marriott.

* * * *

"Tanks."

Beginning with July of last year the following is the performance of the Union Minière in regard to copper. Costs of production, it is said, have been reduced very substantially:—

Output.	Tons.
July	1,472
August	1,368
September	1,185
October	1,303
November	1,010
December	780
January, 1916	737*
February	1,025
March	1,344
April	2,238

* Stopped for repairs.

Last month's output is well up to the figure anticipated by Mr. Robert Williams, and is approaching 30,000 tons per annum. It is further said that the extension of the plant is being proceeded with rapidly, and Mr. Williamss' figure of 40,000 tons of copper per annum should soon be realised. The copper, by the way, is sold in England, and this large output must greatly assist the Allies with the material required for the prosecution of the war.

TOPICS OF THE WEEK.

AN APOLOGIA FOR THE MINING INDUSTRY.

Sir George Albu's annual review of the affairs of the Corporation over which he so ably presides, divides itself naturally this year into two distinct parts. First, there is his survey of the position of the Corporation itself; and, second, there is his review of the wider relations of the industry to the public and to the State. The financial position of the Corporation has already been noticed in our columns; and the reader will find from a perusal of the report of the speech made by Sir George that there is nothing to be added to his very full and explicit statement and explanation. His review of the finances of the parent company—which in the circumstances, has weathered the year very satisfactorily—and of the fortunes of the subsidiaries—all of which are shaping favourably—was of less general interest than his outspoken reply to critics of the mining industry and of the group system whereunder it is mainly controlled. In recent years there has grown up in our midst a class of critic, composed partly of disgruntled failures with a grievance, and partly of newly-arrived preachers of discontent drawn from the ranks of Overseas Socialism and similar 'isms. Hitherto the official attitude of the industry and its leaders seems to have been to ignore these mischief makers, and to trust to the great good sense of the people to discount such attacks. Added to these, we have the class of local cynic, who, in print and out of it, is never happy unless he is getting in a "dig" at the methods of mine administration and the ethics of the mine controllers. Our own attitude, for instance, of deliberate, constructive criticism is held up to scorn as of one unable to see otherwise than that "all is for the best in the best of all possible worlds." To these, Sir George Albu had something very straight and plain to say, and it seems to us he could hardly have chosen a better moment at which to say it. He showed, once again, that the mining industry had been the mainstay of the Union, that the much-reviled group system of the financial houses had been an essential factor in the growth of that industry, and, finally, that the men behind the system were at least as trustworthy as other men. For our part, we believe the country can never be told too often what it owes to the mines of the Rand. Some of the expressions used by Sir George Albu in putting his case were refreshingly simple and unusually effective. "There are so many new factors nowadays in regard not only to the technical and efficient working of the mines," he said, "but also those affecting the relations between ourselves and our white employees and native workmen—and, I might add, with other sections of the community who, chiefly through ignorance or misunderstanding appear to regard the administration of the mining companies as worthy objects for misapprehension and suspicion. At the same time, these same people do not hesitate to declaim against any reasonable taxation placed on their shoulders as being in the highest degree iniquitous, whilst they heartily applaud every suggestion to inflict additional burdens on the gold industry, which, as admitted by Ministers, already bears more than its fair share. The beneficial effect of the gold mines has been for many years, and still is, a far-reaching factor in practically every Province of South Africa. The mines spend large amounts of money directly, or indirectly throughout the Union. The supplies which the mines purchase not only contribute to the prosperity of all the ports of the Union, but also by reason of Customs dues and railway rates constitute a considerable portion of the revenue of the Government, and so have made possible the laying down of new railway lines in some and the extension of existing lines in other parts of the country for the benefit of communities which apparently have little or no connection with this 'university of crime'—the Witwatersrand—and would probably be surprised to learn that they have unwittingly been benefited at our expense!" Dealing with that other product of the time, the local decrier of our credit, Sir George was not less forcible and effective. "For these people there is some excuse, but what about our local critics?" he asked. "It is one of the most extraordinary attributes of this population of the Rand that, although almost every member of it is more or less

[illegible] one of them [illegible] Our man[illegible]ls, at [illegible] and, are just as [illegible] line of busi[illegible] men who le[illegible] responsibility of [illegible] the old days a [illegible] small number [illegible] whom are [illegible] great fortunes, as not [illegible] early enough into [illegible] such as this to [illegible] proved to be were bound [illegible] they could keep their heads and their money? If [illegible] go wrong, then all I can say is that the ground [illegible] dis[illegible] years ago, as the annual accounts [illegible] reputation for the past 10 years can un[illegible] to each shareholder demonstrate. Nowadays we find that [illegible] much more difficult to make, but if anything easier [illegible] not old, and it is at good luck even more than good [illegible] must attend to several things, in order to ensure [illegible] return on the capital embarked on. On the subject [illegible] East Rand, Sir George had a constructive word to [illegible] and one not at present sufficiently [illegible]. He said: "I [illegible] desire at this late stage of my address to enlarge on [illegible] controversial subject of the Far East Rand, but I feel [illegible] to say that the remarks I have just made applies par[illegible] in this district. I have never in all my life been a [illegible] and I hope I shall never live to become one, but I [illegible] early find some explanation, which has been anything [illegible] the riddle, of the extremely speculative character of the [illegible] East" deposits, and I am certain that those people [illegible] upon their faith of the general security of the sens of [illegible] sands of claims which are so glibly spoken of will ex[illegible] ence many disappointments in the years to come. There [illegible] undoubtedly some areas of a very promising nature, [illegible] which may be found to justify the very heavy capital ex[illegible] penditure involved in their development, but there are [illegible] areas—probably constituting the majority—which will not [illegible] realise even a tithe of the money required to prove them."

It only remains to quote Sir George's extraordinarily clear-cut and convincing *apologia* for the group system, as at present practiced on the Rand. The full text of that defence is set out in another part of this issue, and should be read by all interested in the industry. To most of us, brought into daily contact with the system, Sir George was, of course, preaching to the converted. Nevertheless, his carefully marshalled array of facts is most useful and opportune. He said:

> It has been the custom for many years past for some of our critics to hold up to reprobation what is generally known as the group system on these fields. I noticed in a comparatively recent article in a local newspaper that I was described as the champion of that system. Well, gentlemen, whilst I do not aspire to the honour which such a title would imply, I have no hesitation whatever in saying that in spite of—or rather because of—my long experience of the benefits of group control, I am absolutely convinced of its merits so far as my own group is concerned. I do not suggest that the system has not at times been abused, or that it is an ideally perfect one, but I have no hesitation in stating that it has far-reaching advantages, which easily outweigh its disadvantages. I am quite certain that but for the existence of the controlling houses the gold mining industry, which is of such supreme importance to South Africa and the Empire generally, would have been a comparatively insignificant proposition. More than all, it must be admitted that the mining houses have been responsible for the introduction of by far the largest proportion of the huge amount of capital expended on these fields, without which they would never have reached the present standard of output, which is without a parallel in any other country in the world. Whether the return to the shareholders concerned is commensurate is a debatable point."

Having enumerated the several cases in which the General Mining people have nursed and stood by their properties through good and evil days, Sir George concluded:

> I could give you other particulars as to the effect of the group system on bringing out new companies, existing concerns and the benefit not only to shareholders but to the community as a whole, but I think those I have cited will be sufficient to make responsible and thinking people realise that, after all, there is something to be said on behalf of the mining houses, or at least some of them. There are additional advantages, such as economy and efficiency in administration and technical supervision consequent upon centralisation and co-ordination, which are fully recognised by those in a position to form an unbiassed judgment.

It seems impossible to add anything to these vigorous and convincing sentences. We can only express the hope that they will be widely read and pondered by those for whom they were, primarily, intended.

WAR AND ECONOMICS.

Economics in the Light of War" is the attractive title of a series of papers by Professor R. A. Lehfeldt, of the South African School of Mines, published by that body. Prof. Lehfeldt is, of course, but one of many who have lately tackled this fascinating study; and his views compare very favourably in point of method of presentation and definiteness of conclusion, with those of other thinkers along the same lines. Of his work he himself says in the preface that it is an attempt to reconsider political economy in the light that the war has thrown on our views. It deals only with the production and consumption of wealth; this is not because problems of distribution are not urgent, but because there seems to be less that is novel to say about them. Economic theory has stood the test of a new experience and shown itself sound: new detail, and changes of emphasis only, are suggested. His interesting chapters are, in consequence, somewhat discursive; but a thread of continuity runs through them, and that is the tendency to increasing self-consciousness in the economic action of the community. That is not the same thing as socialism, as the term is at present understood; it is possible that it is what socialism may eventually be found to consist in. "I shall not, I hope, be accused of want of sympathy," he adds, "with that tendency, because I have pointed out some difficulties and risks. Without entering upon philosophical questions as to the degree of reality of the State, apart from its citizens, I may say that I regard the development of collective self-consciousness as on the highway of evolution." This is a refreshingly moderate phrasing of what has been shouted at us in strident tones by the Socialists, who command the leading columns of most of our contemporaries. With a similarly modest and scientific air, the author leads us through an extraordinarily interesting survey of the effect of war conditions, until in his penultimate paragraph, he strikes the same note as in his preface.

> "The Ricardian school of economists," he writes, "held that intelligent self-interest on the part of all classes leads to action that is in the interest of the community. There is a great deal of truth in this view—more than writers of the present day, when the tendency of things is away from individualism, are inclined to give it credit for. But no one nowadays would maintain that the harmony of interests is always complete and can be left unguided. The outlook of the individual is too narrow: his action, though when intelligent it is not often antisocial, is incomplete, especially with regard to its effect on future generations. The analogy between a nation and an animal body, though it is both true and imperfect, is nevertheless helpful: the cells of the body need co-ordinating by the conscious action of the body as a whole, and in the same way the economic activities of individuals need co-ordinating by the State. This, however, is not to say that no economic action may be undertaken except by direction of the central authority: a nation would not be truly alive unless some of its vitality—indeed a large part—were in the form of individual initiative of its members: and there will always be some conflict over the uncertain boundary between the functions of the State and those of the individual."

The upshot of the whole business, according to Professor Lehfeldt, is: "The share taken by the conscious action of the community, through its organs, the central and local governments, is however still small, and is likely to grow. War requires the action of individuals to be subordinated to that of the government to an extent that has taken moderns, and especially Englishmen, by surprise. It is likely to leave behind it a lesson that the State both can and should do far more than the nineteenth century thought right. The arts of peace can only reach their full dignity when exercised for aims higher than those of the individual: and we may expect to see cities, nations, and the greater aggregates of the future, taking possession of large economic resources to carry out the schemes they consider necessary for their mature life." However, reluctant we may be to subscribe to or argue against the prophetic virtues of Prof. Lehfeldt, there can be no denial of the clarity and sincerity of his style and views.

"FIRST AID" AS THE CO-ADJUTOR OF "SAFETY FIRST."

Rand Mutual Issues Important Booklet to the Miners.

We have received from the Rand Mutual Assurance Co., Ltd., a copy of a booklet, entitled "Hints on First Aid for Miners," by Dr. L. G. Irvine, nearly 10,000 copies of which are being issued free by that body to underground workers on the mines. A circular addressed to the mine managers, sent out in connection with the booklets, states, *inter alia*: "The Prevention of Accidents Committee of the Rand Mutual Assurance Company realise that 'First-Aid' should go hand in hand with 'Safety First,' and its activities therefore extend in that direction. In this connection the committee has just published, with the sanction of the South African Red Cross Society, a booklet, entitled 'Hints on First-Aid' for Miners,' by Dr. L. G. Irvine, which is an abridged edition from 'First-Aid in Mining' by the same author. The booklet, as you will no doubt observe, is small, handy and well illustrated, and should be of use to all mine workers. The author has taken considerable care in making the publication as complete and concise as possible, and it is couched throughout in plain, non-technical language. The committee has decided to issue one booklet free to each underground white employee on those mines who are members of the Rand Mutual Company. For this purpose I am handing you a supply of the booklets and shall be glad if you will see that each of your underground employees, including onsetters and banksmen, receives a copy. The committee has further decided to make a charge of 6d. per copy to surface employees and others who desire a copy, and for this purpose I am forwarding you a few extra copies, which I shall be glad if you will dispose to such employees, forwarding the amounts realised to this office. The number of copies sent you is based on figures supplied by the Mines Department. Should, however, the supply now sent you be insufficient to meet your demand, I shall be glad to have your advise to that effect. If, however, the number sent you is more than you can dispose of, I shall be glad if you will return any surplus copies to this office. The committee earnestly commend this booklet for careful study to mine workers, and trust that it will serve the purpose aimed at, namely, to make them helpful in the hour of distress."

In an introductory chapter of compelling interest, the booklet has the following:—Everybody knows that mining is dangerous work, in which accidents often happen. Each year a large number of people are killed by accidents in mines, and a much larger number receive severe or slight injuries, not a few of which end in disabling the injured man wholly or partially, and all of which cause a greater or less amount of loss of working time. But what everybody working underground does not realise as he ought is, that, although many of these accidents and of the deaths and injuries which follow are due to some chance which could not have been foreseen, probably the greater number are due to carelessness or ignorance. In 1915, 686 deaths were caused by accidents occurring in the mines of the Witwatersrand. This is a big figure, and it can be much reduced if everybody underground will do his best to help in doing so. Three things are necessary: (1) Everybody underground, both officials and miners, must be on the look-out to try to prevent dangerous conditions; (2) everybody underground must try to do things in the safe way, and not take needless risks. And that is largely in the hands of the miners themselves. Every man must realise that he has a personal responsibility in preventing accidents. Remember that every man working underground is legally and morally responsible for the lives of those working under him. Remember, too, that the careless miner is a danger, not only to himself, but to everyone near him. Recklessness is not bravery, and where it may endanger the lives of others it is not fair play. 3. The third thing that is necessary is that proper first-aid treatment of those who are injured should be organised and carried out on every mine. There is no kind of work in which proper first-aid is more needed than in mining, and there is no kind of work in which more good can be done by it. It pays all the time. Mining injuries are often very severe, because of the great violence by which they are caused. Bits of dirty clothing, pieces of stone or wood are also commonly carried or ground into the wounds, and so the wounds often become "poisoned." Accidents underground usually happen in places far away from the chance of medical help, and in any case the injured man has to be carried up the shaft. It is very easy to make injuries very much worse by careless or ignorant handling. If an injured man is properly treated from the start he will suffer much less pain and shock, there will be less chance of blood poisoning, and the time he will be off work may be very much shortened. That is where first-aid comes in. Proper first-aid will not uncommonly save a life, and may often save a limb. Every man injured underground, therefore, should have his injuries treated by first-aid methods underground, and on the spot. Every sensible man working underground ought to know how to dress a wound, how to stop bleeding, how to put up a broken leg or arm, how to carry out "artificial respiration" where that is required, and, lastly, how to carry an injured man safely. Any sensible man can learn how to do these things quite easily if he gives his mind to it, and all that it is really necessary for him to know is described in the booklet.

NEW AND UP-TO-DATE FOUNDRY will undertake to supply Castings of every description in Brass, Gun Metal, Phosphor Bronze, and Acid-resisting Metal. Duplicate Orders a speciality.

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PERSONAL.

Mr. S. B. Joel is expected to sail for this country on a protracted visit in the near future.

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The Minister of Mines paid a visit to the Rand this week, and received, amongst others, a deputation from the Miners' Union.

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The names of the two workmen mine inspectors are to be announced this week.

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Professor Yates's new session for Mechanical and Electrical Engineers commences Saturday, August 5th. The remarkable successes of the institute are being fully maintained during the current year, no fewer than 75 per cent. of the combined mechanical and electrical engineers, and over 90 per cent. of the mine overseers having been successful whilst twelve managers' certificates were secured in May last.

FOUNDING A UNIVERSITY ON THE RAND.—At the annual meeting of the Witwatersrand Council of Education last week, the Chairman, Colonel Dalrymple, said that this area had now decided to have its own University, and he guaranteed the support of the Council. Mr. Theo Reunert said it was proposed to begin a course of literary subjects in March, 1917, accommodation being provided in the School of Mines. The expenditure would be about £16,000 a year, and to ensure the success of the scheme this sum must be guaranteed for five years. During these five years steps would be taken to secure funds for the permanent endowment of and for providing the sum necessary for erecting a fitting University at Milner Park on a site which it was hoped the municipality would provide.

THE CONTROVERSY REGARDING RAND CONGLOMERATES.

By F. A. Rickard.

[illegible] and [illegible] at such [illegible] subject that [illegible] as long as it [illegible] the [illegible] spirit [illegible] Mr. Mellor. It was [illegible] correct statement of the [illegible] the "fossil [illegible]" B. Horwood [illegible] published [illegible] it seems to me [illegible] that [illegible] a severe shaking. [illegible] Mr. Mellor attempts to ignore the fact. More particu[illegible] Mr. Horwood [illegible] explained the real character of the pyritic [illegible] in causing George F. Becker to give [illegible] the theory of a marine placer. Of course the word [illegible] notes the common origin of the gold and the conglomer[illegible] [illegible] of pebbles is not a placer unless it contains gold, [illegible] valuable metal, in quantity sufficient to warrant [illegible] by mining. The first part of Mr. Mellor's paper can [illegible] intelligently only by those familiar with the stratigraphy [illegible] Rand. Whether the beds of conglomerate were deposited in [illegible] along an ordinary subsiding sea shore is not a matter of [illegible] to the miner, unless the difference in sedimentation [illegible] distribution of the gold. An estuarine placer would be [illegible] accept as a marine alluvium [illegible] the immense area and the [illegible] distribution of conglomerate deposits in this part of Africa did [illegible] doubt on Mr. Mellor's refinement of the placer theory. [illegible] at the Main Reef Leader, to which he devotes the major [illegible] study, were the only phenomenon (or unusual appearance) [illegible] it would be easier to apply his explanation; but the [illegible] submits is applied to an entire geological terrain, [illegible] hundreds of square miles. The analogy with the coastal [illegible] Nome is interesting among other reasons because it indicates Mr. Mellor has read the descriptions of [illegible] "fossil placer," [illegible] that term is applicable properly not to the coastal plain on the Seward peninsula, it being not yet fossilized, but to the raised gold-bearing beaches contained within that coastal accumulation of gravel. When Mr. Mellor argues from Nome to Johannesburg to prove that the concentration of gold in the banket is the result of special condi[illegible] of sedimentation, he cannot, I believe, adduce the evidence to [illegible] a more intimate analogy. In order to place on record, in [illegible] *Transactions*, a short description of the beaches at Nome, from [illegible] so much gold has been won, I proffer the following notes, based upon my visit to the locality in 1908. The gold found on the shore [illegible] the Behring Sea (the beach of Nome) is confined to a narrow strip [illegible] the tidal limit; it is a concentration of gold, garnet and magnetite [illegible] on a layer of clay, which serves as a false bottom. The gold-bearing sediment has been washed from the edge of the coastal plain, [illegible] is an alluvial fan, or delta, created by deposition of the detritus [illegible] down from the highlands of the hinterland, where small [illegible] bearing quartz veins are plentiful. Since gold was found on the [illegible] and the causes producing the deposit were first ascertained, the [illegible] for similar concentrations made in former periods has been [illegible]; several such deposits have been discovered, the first being [illegible] by a bench or terrace, indicating the [illegible] escarpment along [illegible] shore. This buried beach was uncovered at a distance of [illegible] a mile inland and at a depth of 10ft. below the surface of the [illegible] plain. The gold lay at a level of 37ft. above mean tide and [illegible] traced for 20 miles in a line nearly parallel with the coast. Other [illegible] of the same character were uncovered, the richest becoming [illegible] as the Third beach. This was found three miles inland; it [illegible] 68ft. above the sea on bedrock, 60ft. below the surface. The [illegible] bearing sediment was uniformly about 3ft. deep and averaged $[illegible] per cubic yard for a width of about 70ft., the maximum width [illegible] being less than 100ft. The plan of a representative [illegible] the New Year, shows that in this case the ground excavated [illegible] an average width of 75ft. The deposit is more continuous than [illegible] for the blank spaces in the [illegible] are due partly to anxiety [illegible] to interfere with the safety of the [illegible] by breaking into [illegible] and that, while relatively [illegible], owing to having thawed naturally. It is hardly necessary to inform my fellow members that in this part of the world the gravel is frozen to an indefinite depth and that mining is effected by means of "steam points," which [illegible] that it can be worked with pick and shovel. This Third beach was extraordinarily rich; for example, $[illegible] in gold was taken from a strip only 110ft. long, 25ft. [illegible] maximum width, and 3ft. deep. A section of the deposit as I saw it [illegible] the New Year mine is given herewith. It covers a height of 11[illegible] [illegible] 45ft. to 50ft. of alluvium overlie the portion illustrated [illegible]. Under the [illegible] gravel of the present coast [illegible] the former surface. [illegible] notes lie buried in the grey clay [illegible] layers of pebbles, [illegible] sand and gravel intervene, before the "ruby sand," or garnet [illegible] concentrate, of the former beach deposit is reached. A handful of it is examined and gold is clearly perceptible. Underneath lie boulders consisting of surf-worn fragments of the country rocks that formerly enclosed the veins from which the gold was derived. These rest on grey quicksand, which in turn lies upon bedrock, a typical schist. More usually the gold-bearing layer lies on true bedrock or upon a false bottom of clay. The bedrock slopes gently from the seaward edge of the deposit, the rise is 1 in 12 to about the centre of the deposit, where it becomes steeper, averaging 1 in 10. In the slight hollow thus formed the richest sediment [illegible] found. If anybody can find a resemblance between such a deposit as this and the Main Reef Series of the Witwatersrand, he is welcome to it.

Mr. Mellor refers to sundry papers describing the Potsdam conglomerate in the Black Hills of South Dakota. I submit that the evidence on record does not justify him in saying that the Homestake vein is "the source of the gold in the conglomerates." J. D. Irving has stated clearly that "there have been several different periods of mineralization," some of which "followed the entire deposition of the sedimentary rocks and were later than the intrusion of the dykes and bodies of rhyolite." These intrusions are of post-Cretaceous age. While some of the gold in the Potsdam conglomerate is of detrital origin, derived from the erosion of the Homestake lode, the high-grade portions (the only ones worth mining) are due to a secondary enrichment in early Tertiary time. I examined the Hawkeye-Pluma mine in the conglomerate, and found only a relatively small portion of the conglomerate—that portion that had received additional gold in late geologic time—rich enough to be considered "ore." All of this information is given in my paper on the "Persistence of Ore in Depth," read on November 19th, 1914,* and Mr. Mellor, by a reference, shows that he has read it. Why then ignore not only what I have written, but the more detailed descriptions of Emmons and Irving? To show that my interpretation of Emmons is not prejudiced I quote Maclaren,† who says: "Emmons‡ concluded from the water-worn character of some of the gold and from its concentration near bedrock, that some at least of the gold of the conglomerate is of placer origin, but that the enrichment of the deposit to one of economic value is due entirely to the work of secondary auriferous solutions, which are also responsible for the pyrites with which the auriferous portions of the conglomerate are invariably associated. The pyrites is often found occupying fissures and cavities in the pebbles. Clear evidence of secondary enrichment is afforded by the presence of films of gold in the laminations of the schist and in crevices from 3 to 10 ft. below the base of the conglomerate."

(*To be continued.*)

[illegible] to the I. of M. and M.

* "The Rand Banket and Its Gold Content," by C. Baring Horwood, *Mining and Scientific Press* [illegible] to December 27, [19]13, vol. cvii.

* *Trans.*, vol. xxiv., 352, 171-86.

† "Gold." By J. Malcolm Maclaren, 1908, p. 98.

‡ Professional Paper No. 26, U.S.G.S., 1904, p. 99.

Stock Exchange Values.

According to the "Bankers' Magazine's" computation, the value of 387 representative Stock Exchange securities appreciated £73,512,000, or 2.6 per cent., between May 19 and June 21. The highest actual gains were £11,214,000 in 31 Foreign bonds, £11,617,000 in nine British and Indian Funds, £9,940,000 in 17 American Railway shares, and £9,058,000 in 25 Home Railway Ordinary stocks. In percentage Industrials top the list with a rise of 8.6 per cent. in 38 of them, while South Africans, with 7.9 per cent., and Home Railway Preferences, with 6.4 per cent., take high rank. The only group showing a decline were Copper shares.

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THE YEAR WITH THE T.G.M.E.

Extracts from the Annual Reports of the Directors and General Manager—Detailed Review of Mining and Prospecting Results—The Question of Ore Reserves.

In the course of their annual reports for the year ended March 31, 1916, the directors of the T.G.M.E. state that the tonnage of the ore reserves of the Central Mines has been maintained throughout the year; but that the average value has shown a considerable decrease. This is partly due to the fact that it has been found desirable to assume a somewhat larger milling width than last year, but is chiefly due to the fact that the ore developed during the year has been consistently of much lower grade than the average of the ore reserves at the beginning of the year. At Elandsdrift there is an increase of 6,550 tons in the reserves, with a slightly lower average grade. At Vaalhoek there is a very considerable decrease in the tonnage as well as a fall in the average grade. This is accounted for by the entire cessation of development operations in the best part of the mine which has, until quite recently, been under water as a result of last year's floods, and also by the loss of a large tonnage of good grade ore owing to the collapse of flooded portions of the mine. As the Resident Manager points out, however, this tonnage should again become available as reclamation work proceeds. Accounts.—The net profit on working for the year was £167,327 5s. 9d., to which must be added the unappropriated balance at 31st March, 1915, £105,050 15s. 2d., less £119 1s. 9d. paid out in respect of old dividends which had been forfeited, £137 10s. 11d., the difference between the nominal value of debentures purchased during the year and their actual cost, and £286 18s. 10d., for unclaimed dividends written back in terms of Article 130, making a total of £272,683 8s. 11d. This total has been dealt with as follows:—Government Taxes, £25,084 17s. 1d.; dividends Nos. 19 and 20, £120,845; debenture redemption, nominal value, £25,908; funds transferred, £17,293 8s. 1d.; balance unappropriated carried forward and represented by cash and cash assets, less liabilities, £83,552 3s. 9d.; total, £272,683 8s. 11d. The amount of £17,293 8s. 1d., funds transferred, represents the net expenditure on capital account during the year. New development suspense account, which was closed at the 31st March, 1915, was reopened at the 1st October, 1915, on the previous basis, and at the 31st March, 1916, showed a balance of £11,576 11s., which is £517 14s. 1d. lower than the balance last reported. The decrease is due to additional expenditure on development and to provision for the decrease of 766 tons in the ore reserves at Central Mines. Included in the working profit for the year is the sum of £20,629 9s. 1d. recovered from the underwriters of profits insurance in respect of flood claims. Taxation.—In addition to the usual tax on profits and income tax, the accounts this year include an item of £10,242 1s. 11d. for special war levy, representing the company's proportion of the levy of £500,000 made upon the gold mining industry of the country for war purposes during the year. A similar levy has been made in respect of the current year. Income tax is £1,631 8s. 6d. larger than for the previous year, as the revenue subject to this tax was increased by the amount recovered for flood insurance claims. Debentures.—Under the terms of the Debenture Trust Deed, £25,908 debentures have been purchased during the year at an average price of £99 9s. 5d., and cancelled making the total purchases to date £71,916 and reducing the outstanding debentures to £52,084. The amount required to be redeemed by the 1st April, 1916, was £60,000 and, therefore, no drawing was necessary. The excess of £11,916 will be available towards the £15,000 required to be redeemed on the 1st April, 1917. Dividends.—Dividends Nos. 19 and 20, of 10 per cent each, absorbing £120,845, were declared payable to shareholders during the year. The amounts due to shareholders resident in enemy territories in respect of dividend No. 19 were paid over to the Bank of England for the credit of the Paymaster-General in accordance with the official direction of the Custodian, in terms of the "Trading with the Enemy Amendment Act, 1914," England. The amount so due in respect of dividend No. 20 has been retained in South Africa pending legislation by the Government of the Union of South Africa. The expenditure on capital account for the year was £23,211 12s. 6d. Extension of Plant. The extensions of the plants at Elandsdrift and Vaalhoek referred to in the last report, and consisting of five stamps, with the necessary additions to cyanide plant at Elandsdrift, and of a tube mill, with the necessary additions to cyanide plant, at Vaalhoek, were brought into commission during the year and are working satisfactorily. An auxiliary generator is being installed at the Elandsdrift Power Station, the old section gas plant being inadequate. The company's wattle plantations at Elandsdrift have been inspected, and very favourably reported upon, by the Government Conservator of Forests. The question of a plant to deal with the bark is under consideration. The company has acquired on satisfactory terms, the plantation laid out upon the farm Vygenboom, No. 151, under a tree-planting lease granted by the company. The company's claim for loss of profits, due to the floods reported in the last annual report, has been met by the underwriters, and a sum of £20,629 9s. 1d. has been received. The satisfactory arrangement made with the Bank of England with regard to the realisation of gold continues; but the cost has increased owing to the war, more especially in the case of insurance, freight and refining. The company continues to assist the dependents of its employees who are on active service in connection with the war. With a view to meeting the requirements of the company for transport and meat supply, cattle ranching on a small scale has been commenced on certain of the company's farms. In order to meet the wishes of the company's tenants, application has been made to the Government for the recognition as a township of that portion of the farm Ponieskrantz, No. 1351, on which the existing village of Pilgrim's Rest is situated. The establishment of a township will enable the tenants to obtain a security of tenure which is not possible under existing conditions. The regulations for the control of the township by a Health Committee have been approved by the Administrator of the Transvaal.

General Manager's Report.

The General Manager, Mr. R. A. Barry, writes:—Considerably increased activity was shown in prospecting operations, especially during the latter half of the year. A sum of £8,913 2s. 9d. was spent on this account during the year, being an increase of £2,961 1d. over the previous year. The following is a summary of the work done:—Driven, 6,366ft.; risen, 483ft.; sunk, 781ft.; reopened, 705ft.; cutting, 6491t.; trenched, 3,985ft.; excavated, 125 cubic yards. Klipkraal No. 460.—After doing some considerable work on this farm work was discontinued pending results of operations on the neighbouring farm Rietfontein. Hermansberg No. 1035.—Some work was started towards the close of the year in order to test reefs lying at a lower horizon than that previously exploited; as yet insufficient work has been done to prove anything. Finsbury No. 621.—Work here has been chiefly confined to the alluvial deposit, which covers a wide area. Considerable washing was done and some encouraging results were obtained from the ground held by the company on the discoverer's claims. The tributors at work on the other half have had rather variable results, which, however on the whole appear to point to some promise of payability. Operations are proceeding with a view to proving the extent of the payable deposit which must, however, take some considerable time to accomplish. The Government have announced their intention of throwing this farm open to pegging, and steps are being taken to secure our mynpacht and rights under the Gold Law. In view, however, of the extent of the deposit and the limited time at our disposal in which to prove its payability, even on broad lines, our mynpacht will have to be selected in the dark and with little or no information at our disposal, which, I think,

... s a hardship to the owners at times, in the end ... the chances of ground being systematically ex... on proper lines. During the year some 758 417 ozs. ... were won from the alluvial, valued at £3,154 0s. 2d. ... cost of £1,688 17s. 0d., showing a profit of £1,465 3s. ... tributor has paid the company some £177 6s. 10d. ... ley on the ground washed by him. Kliprots No. 611 ... indications of payable alluvial have recently been ... by the tributor on this farm under the prospecting ... which is in force here, and work is being pushed on. ... Yacht, No. 945.—Mining Rights over the Werf Myn... were secured and work is afoot to test alluvial deposit ... this ground, in conjunction with our holding on Finsbury ... No. 246.—Work here was stopped as a result ... discouraging results. Olifantsgeraamte, No. ...—A considerable amount of prospecting work has been ... during the year on a reef lying some 100 feet below ... Theta horizon, and some promise of payability has been ... Work here is being actively continued. Grootfon... No. 217.—A great deal of dead work was done in the ... country, which had to be pierced before the reef could ... picked up on the western side of the dyke formation. Recently the reef has been exposed at one point, and though narrow and poor where discovered, the work will be pushed ahead with a view to proving values. Goudverwacht, No. 660.—After doing a considerable amount of work with very discouraging results, prospecting operations on this farm were discontinued. London, No. 1220.—Prospecting operations here have continued to be most discouraging, and application has now been made for the deproclamation of the farm, which was thrown open by Government on insufficient information and where all work has hitherto proved nothing of real value. Ponieskrantz North.—Operations have been renewed here with some promising results. In all some 13,237 tons of value 6·2 dwts. have been opened up on the Portuguese Reef horizon, and the indications of continued payability are still encouraging. Work is also being done on two other reefs at a higher horizon, with some promising results, but as yet the work done is an insufficient guide to the future. Morgenzon Claims, No. 1187.—Considerable work has been done here on the Theta horizon, but results have hitherto not been very promising. Beta Reef.—A good deal of work has been done to try to locate payable reef to the west of the Beta dyke, but hitherto without success. On the east of the dyke a certain amount of work has also been done to try to prove the Beta Extension reef. Results hitherto have shown a very narrow reef carrying fair values. Darkes Gully.—The reef here was considerably exploited, but though very consistent in thickness, no permanent values could be found and work was discontinued. Theta Hill.—A shale reef, which in the outcrop held some promise, was discovered here towards the end of the year, but subsequent work has proved discouraging; prospecting, however, is still in progress.

Alluvial.

There are no further developments of any note to report with regard to the Blyde River and Pilgrim's Creek alluvial deposits. Preparations, however, are now in hand with a view to conducting washing operations during the ensuing year in order to form some estimate of the value and extent of the deposits. The alluvial undoubtedly covers a wide area, but it is impossible to form an accurate estimate either of its gold contents, or of the other factors influencing its payability until actual washing operations are started, on a more or less extensive scale.

Development and Mining.

Central Mines.—In spite of vigorous efforts and a heavy expenditure on development, we have hitherto been unable to locate any further extension of the Duke's Hill—Peach Tree pay chute, and though work is still being pushed on indications so far continue to be unfavourable. Duke's Hill South Mine.—Development here exposed ore of a considerably lower value than previously opened up, whilst the percentage of unpayability was high, which has had the effect of reducing the value of the payable reserves, although the tonnage has been maintained. Reef indications towards the dip continue to be discouraging up to date. Peach Tree Mine.—The work towards the dip of this mine has given nothing but discouraging results over a wide area, but a fair tonnage of good reef was opened up on the south side of the hill, in which direction, however, the area carrying reef is limited in extent. Beta Mine.—Considerable bodies of low grade ore were opened up, and this mine was coupled up and thrown into commission towards the close of the year, the ore reserves here showing a good increase of low grade but payable rock. Theta Mine.—Owing to a high percentage of unpayable development and the exposure of narrower reefs, the ore reserves in this mine showed a decrease. Work was considerably hampered by the difficulties of the 1915 flood, but these have now been satisfactorily overcome. Theta Extension Mine.—Much reclamation work was necessary here, but we are now in a position to proceed with the coupling up of this mine to the general system. A fair tonnage of 10 dwt. ore is available for stoping. Brown's Hill Mine.—Considerable work was done here in coupling up and rendering the tonnage of this mine available for the mill. There is a very satisfactory tonnage developed in the ore reserves, whilst present indications point to some promise of continuity. The grade has hitherto been below our average. Graskop Mine. Reclamation work was necessarily slow after the collapse of this mine in the 1915 floods, but recently we gradually succeeded in overcoming most of the difficulties. Ore reserves have of necessity suffered, and as things now are, this mine can only be regarded as a small producer and a low grade (7 dwt.) proposition. Columbia Hill Shales.—A fair tonnage of good payable ore exists in this section, and it is hoped to bring this mine to a producing stage during the coming year.

Elandsdrift Mine.

Owing to the very heavy water continuously encountered, development results have been much hampered, but promising values continue to be maintained and every effort is being made to deal with the water problem. An auxiliary power generating plant is being installed and necessary improvements made to the existing power line. Additional five stamps with the necessary cyanide equipment have been installed and are working satisfactorily; working costs have shown an appreciable reduction. Full details with regard to ore reserves and the various development operations will be found in the manager's report. The expenditure upon wattle plantations should, in the near future, begin to bear results. The plantations are in excellent condition, and it is hoped that we may be able to instal a plant to deal with the bark from the first thinnings during the present year.

Vaalhoek Mine.

The results of the flood of 1915 were much more far-reaching than had been anticipated. In the river section the greatest difficulty was experienced in lowering the water which had accumulated, and when this was successfully accomplished, it was found that the entire workings throughout this section had collapsed. The ore in this ground previously included in the reserves has, therefore, had to be deducted therefrom. Practically no new development was possible and much reclamation had to be done and entirely fresh drives had to be driven in order to reopen ore previously standing in the reserves. Work was necessarily slow on account of the limited number of points of attack. Towards the end of the year all the working faces were cleared of water, but, as the future of the mine lies in the river section, it is most important that every precaution should be taken to ensure against development work being hampered here, and extra pumping provision is now being made. In the hill section work was confined to locating the reef in the western and northern areas, and some prospecting is in progress. In the Nek section the leaders are being thoroughly exploited, and seem to afford some promise of good results, but are most variable in character. Owing to the loss of the biggest and richest area of the mine through the 1915 floods, everything, as will be seen from the manager's report, received a serious set back; development was stopped, expenditure was increased, the grade of ore to the

mill fell, and ore reserves were decreased. The decrease of ore reserves entailed the writing off from development account of a sum of £5,045 6s. 9d., which amount was charged against the working profit for the year. During the last months of the year indications have been much more favourable, and it is hoped that we are now through the worst of our troubles at Vaalhoek. The tube mill and additions to the cyanide plant came into commission towards the end of the year, and though the original plant is old and unsatisfactory and must always be expensive in maintenance, it is working as well as can be expected. Ore Reserves.—Central Mines.—Development has shown consistently lower grade results than those formerly obtained; exceptionally large unpayable areas have also been encountered. The tonnage has, however, on the whole, been maintained, being estimated at a total of 406,226 tons of an average value of 9·37 dwts., which is a decrease in value of 3·93 dwts. per ton from the preceding year. In this year's estimate of ore reserves it has been found necessary to increase the total average milling width by 8·6 inches, as compared with the previous year. This would have had the effect of considerably increasing the total ore reserve tonnage, but experiments have shown that the average weight of the reef is such that the factor of 13 cubic feet to the ton, previously used, was too small. A factor of 15 cubic feet to the ton has been used this year, which has correspondingly lessened the total tonnage. Elandsdrift Mine.—The reserves show an increase of 6,550 tons over last year, but a decrease in value of 0·8 dwt. per ton, being estimated at 62,730 tons of an average value of 15·7 dwt. Vaalhoek Mine.—The reserves show a decrease of 26,533 tons and a drop in value of 1·43 dwt. per ton, standing now at 37,762 tons of an average value of 9·08 dwt.

Working Expenditure and Revenue.

The profit on working for the year was £150,083 3s. 8d., or £74,837 14s. 3d. less than last year. The chief factor in this decrease has been the lower grade of rock sent to the mills, whilst the war has had a considerable effect upon costs, and the results of the 1915 floods have been very far-reaching.

	Revenue. £ s. d.	Per ton milled. s. d.	Working Costs. £ s. d.	Per ton milled. s. d.
Central Mines ..	280,873 1 10	41 6.1	163,509 4 5	24 0.1
Elandsdrift Mine ..	45,346 15 5	82 4.0	14,108 14 10	25 7.4
Vaalhoek Mine ...	26,176 11 11	29 1.6	19,649 19 6	21 10.4
	£352,396 9 2	42 10.7	£197,267 18 9	24 0.1

	Profit. £ s. d.	Per ton milled. s. d.
Central Mines	117,363 17 5	17 7.1
Elandsdrift Mine .. .	31,238 0 7	56 8.6
Vaalhoek Mine	6,526 12 5	7 3.2
	£155,128 10 5	18 10.6
Less amount written off against decrease in Vaalhoek Mine Ore Reserve	5,045 6 9	7.4
	£150,083 3 8	18 3.2

There has been an increase in the working costs at the Central Mines of 1s. 6·4d. per ton milled in comparison with the previous year, whilst Vaalhoek Mine shows an increase of 1s. 10·9d. per ton milled. At Elandsdrift Mine, working costs showed a decrease of 3s. 9·8d. per ton milled. Over the three mines there is an increased working cost of 1s. 4d. per ton milled, and a decreased working profit of 8s. 10·8d. per ton milled. With the present trend of development, the absorption of the most accessible, the richest and most easily worked deposits, the increasingly scattered nature of all workings, and the additional working units now necessary to keep the mills supplied, I can foresee no diminution in costs in the near future nor increase in profits which might come from a high grade. Accumulated Sands.—14,616 tons of accumulated sands from the old Clewer Mine were treated during the year, at a profit of £3,388 1s. 9d., but were finished in January, 1916. Tributors.—The royalty paid to the company by the tributors on various areas was £198 16s. 1d. Township.—The great majority of leaseholders having expressed themselves in favour of having Pilgrim's Rest proclaimed a township, a formal application for the declaration of a township was made in the Government Gazette of the 18th February, 1916, and it is expected that the formalities will be proceeded with and a township declared during the ensuing year. Native Labour.—The native labour supply gradually increased towards the end of 1915 and has been such as to fill all our requirements since the beginning of 1916. Mining Timber.—Some £5,681 were spent on mining timber drawn from the company's properties during the year; the heavy ground caused by the 1915 floods and the great amount of reclamation work, which became necessary as a result thereof, created a large demand for timber in all our mines.

General.

The war has not only had a direct effect upon results through the increased costs of supplies and the payments to absentees on active service, but its indirect effect has also been great. Many of our best and most active men have left for active service; every effort has been made to spare those men who were willing and fit to take up active service or munition work and to encourage them to do so. The other outstanding features of the year have been the far-reaching effect of the 1915 floods and the disappointingly low grade of ore opened up by development in the existing Central Mines. The policy of very active prospecting which has been adopted will, it is hoped, eventuate in the discovery of some payable propositions somewhere within the wide area now being attacked, but time and patience and a great deal of work will most certainly be required. At the Central Mines, as resident manager, Mr. Carter has shown untiring zeal in the company interests. At Elandsdrift Mine, Mr. Patrick has done excellent work, and it is largely due to his unflagging efforts that the position here is as promising as it now is. At Vaalhoek, Mr. Milverton Ford has had a long uphill fight against many exceptional difficulties, in which he has shown the greatest perseverance and untiring interest. Mr. Carter acted as General Manager for some three months during Mr. Aimetti's absence on leave, upon whose resignation at the end of August, 1915, I was appointed as General Manager. In conclusion, I would like to place on record my appreciation of the good work done by the respective managers and the staff generally, and also the general body of employees.

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THE WATER SUPPLY OF THE RAND.

Review of the Conditions Last Year—Details of the Vaal River Scheme—Points from Annual Report of the Rand Water Board.

[illegible] this annual report the [illegible] dated March [illegible] 1916, the Secretary of the Rand Water Board writes:

[illegible] rainfall was below the average experienced over the whole [illegible] during the summer of 1914-15, produced the [illegible] of the Board's drainage and sources of [illegible] to the Zuurbekom district, and of filling to [illegible] the storage reservoirs of the Mining Companies [illegible] the Board for the last named service, the water [illegible] for which is necessarily drawn during the [illegible] as long as possible. The Board had, [illegible] to bring the domestic and [illegible] other [illegible] to restrictions. The grant to the summer [illegible] 1915-16 [illegible] have, as during the corresponding [illegible] 1914-15, been restricted to [illegible] and was 5.69 [illegible] and 1.59 [illegible] 31st March last. [illegible] were under [illegible] and [illegible] at that date [illegible] Board's general [illegible] temporary [illegible] approximately, [illegible] as against [illegible] about 10 million [illegible] would be [illegible] the end of the Zwart [illegible] does not [illegible] 5.77 [illegible] early in December, [illegible] 5.77 million [illegible] at the end of March last, and that the [illegible] mine [illegible] of Springs [illegible] showed a gradual [illegible] during the year. Particulars are given in Appendix [illegible] average [illegible] and sold during [illegible] months [illegible] the [illegible] was [illegible] by the Chief Engineer [illegible] as possible, [illegible] an allowance of 7 per [illegible] for wastage of various kinds of [illegible] distribution.

WATER SALES.

[illegible] sold half [illegible] the Mines, Municipalities, Native Administration and [illegible] since the commencement of the Board's supply operations, the 31st March, 1905. On reference to that schedule, it will be noted that the [illegible] year to the 31st March last has been the [illegible] of highest demand during the eleven years in question. Details [illegible] of the quantities supplied monthly by the Board to [illegible] consumers during the year under review, are given in Appendix VI., which also shows the total supplies during each of the preceding years. The financial year just ended was the first of 1916 of which it can be said that the Board's available water supply exceeded the demands of consumers at all times.

ESTIMATES OF REVENUE AND EXPENDITURE, 1916-17.

The estimates for the year 1916-17 show that the uniform rate for water has been reduced to 6d. per 1,000 gallons as from the 1st April, 1916, and that the amounts of the special rates referred to above have also been altered. It is likely that the Board will be in a position to reduce the uniform rate to 7½d. as from the 1st October next, in which case the special rates chargeable to the crushing mines and to the non-contributing consumers, will undergo further alteration. The estimates also show that the Board expects to dispose of 9¼ million gallons daily during the six months to the 30th September, 1916, and 9½ million gallons during the following half of the financial year 1916-17.

VAAL RIVER SCHEME.

The original Vaal River scheme, adopted by the Board in September, 1913, and approved by the Union Parliament under Act No. 1 of 1914, is fully described in the Board's annual reports for the years 1913-14 and 1914-15. It will be sufficient, therefore, to say here that, as originally designed, it provided for the erection of a barrage to impound a quantity of water sufficient to supply 20 million gallons a day for the Board's purposes. It was proposed, however, to take, in the first instance, only 10 million gallons daily, and the plans and estimates originally framed by the Board's Chief Engineer included the pipe and machinery necessary to deal with that quantity of water. The estimated cost at pre-war prices was stated at £1,086,324, exclusive of interest on cost during construction, which would probably amount to about £70,000.

DELAYED BY OUTBREAK OF WAR.

As stated in the last annual report of the Board, the preliminary arrangements in connection with the commencement of the scheme referred to above had been made by July, 1914, including those for raising, by the issue of stock, the funds required to construct and equip the works. The outbreak of the European War on the 1st August following, however, made it quite impossible for the Board to raise a loan on reasonable terms, and a subsequent regulation, issued by the Imperial Treasury, practically closed the doors of the London Money Market against every borrower, excepting the State. The immediate accomplishment of the Board's purpose having been thus defeated, the important question shortly afterwards arose, what measures, if any, could be adopted to prevent the difficulty likely to be experienced to keep pace with consumers' demands during the war period, [illegible] until a loan could be raised and the Vaal River scheme completed. It will be remembered that during the three previous years, the rainfall on the Rand and in the Transvaal generally was very scanty, and that [illegible] period, the [illegible] tions and [illegible] the Board suffered severely owing to the inability of the Board [illegible] to obtain [illegible] to meet a reasonable state of affairs, [illegible] were carried [illegible] months with the object of effecting further [illegible] of instance, against a shortage during the late [illegible] and [illegible] each year. Out of these investigations [illegible] to know, from the Board's [illegible] emption fund sufficient [illegible] to construct a modified Vaal River scheme, which would provide [illegible] supply of water as would be [illegible] to secure the Board's [illegible] for some years to come. On [illegible] to this proposal from the engineering, financial and [illegible] points of [illegible] was found practicable and was accepted as a definite policy [illegible] Standing Committee, and adopted by the Board on the 17th March [illegible] subject to certain minor modifications.

MODIFIED SCHEME, 1916.

This modified [illegible] provides for the erection at the Lindique site, of the Lower [illegible] in connection with the original Vaal River scheme, [illegible] a quantity of water sufficient to supply [illegible] million gallons a day, but it is proposed only to instal plant and machinery [illegible] and otherwise dealing with a first instalment of about five [illegible] gallons a day. A detailed description of the works to be carried out [illegible] the cost of them, will be found in the report by the Chief Engineer.

ESTIMATED COST.

The cost of the modified scheme, as estimated by the Chief Engineer at the [illegible] ing in November, 1915, is £775,[illegible]15 including: interest on cost during construction, about £70,000; the amount of £13,[illegible]03 the value of stores in stock which were taken over from the late Victoria Nyanza [illegible]; and, approximately, £[illegible],000 broadly expended on the [illegible] of data, legal and Parliamentary expenses, the erection of [illegible] weirs, and on other minor works and services classified under the head of preliminary expenses. The amount of capital to be [illegible] £753,000, including the sum of £42,000 above mentioned which, having been borrowed from the [illegible] and reserve funds, must be repaid to these funds within a reasonable time.

(To be continued.)

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Correspondence and Discussion.

Comments on Questions Arising in Technical Practice or Suggested by Articles in the Journal—Views, Suggestions and Experiences of Readers.

Chemists for Munitions Work.

To the Editor, *South African Mining Journal*.

Sir,—I enclose copy of a letter which has been received from the Ministry of Munitions of War regarding the employment of chemists experienced in the manufacture of explosives and acids. My Council trusts that you will assist it by giving prominence to the matter in an early edition of your paper. All applications, giving particulars of experience and testimonials, and a copy required should be sent to the undersigned, P.O. Box 5251, Johannesburg, immediately, when they will be transmitted to the Ministry of Munitions. Thanking you in anticipation.—Yours, etc.,

JAS. GRAY, Hon. Secretary.

Ministry of Munition of War,
Dept. of Explosives Supply,
Westminster, S.W., June 22, 1916.

Dear Sir,—Your letter dated 17th April, addressed to the Hon. Minister for Defence, Capetown, has been forwarded through the War Office to this Department, and in reference thereto I am directed to ask whether you could kindly furnish the Department with full particulars relating to those chemists mentioned in the list which accompanied your letter, who have had actual experience in the manufacture of explosives and acids, and the works in which they have been working. A number of men are available here who have got a general knowledge of chemistry, but we should be glad to hear of any men who are available who could be trusted to take over the more responsible posts in connection with the manufacture of explosives, such as superintending production, directing and controlling labour in productive units. It would be very helpful if in giving us the particulars asked for you would kindly include information as to the salary which any men you mention would require. —Yours, etc.,

(Signed) A. E. TAYLOR,
Staff Bureau.

J. Gray, Esq.,
Hon. Secretary,
South African Association Analytical Chemists,
P.O. Box 5251, Johannesburg.

Literature for Our Soldiers and Sailors.

To the Editor, *South African Mining Journal*.

Sir,—The Committee of the South African Railways St. John Ambulance Brigade would be greatly obliged if you would be so kind as to find space for the attached in your paper. Six months' work has resulted in 137,000 books, 97,981 magazines and approximately 100,000 weekly papers, being distributed amongst our soldiers and sailors, but as demands for literature increase, and the supply is diminishing, it is again necessary to bring the need before the public. Thanking you in anticipation,—Yours, etc.,

A. H. HAMILTON, Secretary.

LITERATURE FOR SOLDIERS AND SAILORS.

Six months ago the South African Railways St. John Ambulance Brigade organised a scheme to provide our soldiers and sailors with literature. The response of the public throughout the Union has been magnificent, and has resulted in 135,000 books and magazines, and approximately 100,000 pictorial papers, being supplied to our men, particularly the sick and wounded in East Africa, Nyasaland, France, Zanzibar, and up the Persian Gulf; the men on all warships and transports visiting Durban are also generously provided for. In order to keep the good work going, many thousands of books and magazines are needed monthly, and the public are therefore asked to send any they can spare, or can induce friends to give, to the Municipal Librarian, Durban, marked "Free Gifts for Troops." It is not generally known that such parcels, will, if so addressed and handed in at any Union Station, be conveyed railage free, to Durban, and the Committee of the South African Railways St. John Ambulance Brigade, of which Mr. J. W. Carr, Divisional Superintendent, Durban, is Chairman, will do the rest. It is not practicable to publish the scores of acknowledgments received, but the following few extracts will show how the literature is appreciated:—Miss McLeish, Matron of the S.A. and General Hospital, Nairobi, says: "The 52 cases of literature have been safely received, and much appreciated by the sick and wounded." The Captain of the Hospital at Voi, writes: "We were greatly in need of reading matter, and I can assure you we greatly appreciated the thoughtfulness of the South African Railways St. John Ambulance Brigade." Lieut.-Colonel Findlay, A.D.M., says: "The books and magazines have been greatly appreciated." Captain Watson, I.C., Adjutant, General's Office, intimates that the "gifts are much appreciated by all." Lieut. Shepstone, R.F.C., says: "Thank you for the very welcome 181 books." H. E. J. Matthew, Chaplain, R.N., says: "The literature has been very much appreciated, all the men were short of anything to read. We are also distributing some of it among the smaller ships." Staff-Paymaster, T. W. S. Seath, Zanzibar, says: "The books and magazines have chiefly been given to the Hospital Sick quarters, and the remainder sent to men employed on "Look out" stations, and the Royal Navy Barracks, Zanzibar. They are greatly appreciated, especially in the hospital, where, until the arrival of your cases there was a great shortage of literature." Dr. C. Hagberg Wright, Secretary to the War Library, London, writes that the literature has been sent to the South African Brigade in France, and continues: "Will you thank, in the name of the War Library of the British Red Cross, and Order of St. John, Sir W. W. Hoy, the St. John's Ambulance Brigade, the Mayor, and Mr. Osborne, the Municipal Librarian of Durban, and all the members of the collecting and distributing committee for the trouble and expense they have taken for our sick and wounded sailors and soldiers. It would be a great kindness if you could, through the medium of your Press, let the generous public know how grateful the War Library is for the magnificent help, and that already we are unpacking and sending to our wounded soldiers and sailors the books and magazines that have come so far to cheer and help them."

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POSITION AND PROSPECTS OF THE NEW AREACHAP COMPANY

Circular Setting Forth Full Particulars.

[illegible] Areachap, in [illegible] Pangton, [illegible] which runs for a [illegible] September, 1916, [illegible] company has [illegible] ton of iron [illegible] fully [illegible]

EARLIER HISTORY

[illegible] the value of this property it is useful to recall [illegible] Some years ago [illegible] worked by a company [illegible] although unsuccessful [illegible] point of view of profit, [illegible] means of two shafts [illegible] and about 1,100 feet apart, the existence of a rich [illegible] with a surface deposit containing [illegible] down to a depth of about 200 feet. Below this lie about 200 feet of passage, after which the [illegible] crosscuts and drives met with [illegible] rich copper ore in the sulphide zones. Altogether of no immediate financial importance at that time, it was noted that both shafts passed through a large body of iron pyrites, rich in sulphur and [illegible] payable parcels. Attention, however, was then fixed solely on the copper ore. It will be seen what an important change has been [illegible] about by the conditions of to-day. The outcrop, a long and [illegible] copper ore in the sulphide zones, was developed by [illegible] feet in length—was [illegible] tested some 5,200 tons of ore. Of these, 200 tons, averaging 2½ per cent. of pure copper, were actually exported to Swansea and sold. In spite of the richness of the ore, however, recents [illegible] expenditure, and the company was liquidated, leaving [illegible] tons of valuable ore at grass, and the serviceable plant to be sold [illegible] on the spot to the highest bidder. The ore abandoned at surface—[illegible] to be three or four times as rich as the ore now smelted at a [illegible] profit by the Cape Copper Company—is an immediately available [illegible] of the new company, and, according to the assays, contains [illegible] which at to-day's prices, represents several thousands of pounds [illegible] of the cash price paid for the whole property. This ruinous [illegible] ran, as well as the [illegible] was forced upon the old company by the overwhelming cost of [illegible]. At that time the nearest point on the railway (Prieska) [illegible] 17 miles distant from the mine, and across those heavy miles of [illegible] machinery, stores, ore, and all the various requirements of the [illegible] had to be borne on ox-wagons. The heavy charges and [illegible] delays, both in conjunction and extent, left the company [illegible] profit, and though the ore was handled on a minimum [illegible] of 25 per cent., the price of copper, which then stood at about £75 per ton, left no margin over the mine charges for transport.

THE NEW COMPANY

In April of the present year the [illegible] began work in very [illegible] circumstances. The headgear, [illegible] engine and boilers had [illegible] on the spot, but were well cared for. Acquired by the [illegible] they were [illegible] admirable condition. The reopened [illegible] entries gave [illegible] driving results, and 12 [illegible] of high grade ore [illegible] already quarried in the [illegible] cause, and it [illegible] stated that the company can [illegible] ore of this grade [illegible] at the rate of from 30 to 50 tons per week at a profit, while this [illegible] will be steadily increased as the [illegible] opened out. The [illegible] the work carried on to date [illegible] has far surpassed the estimates upon which the property was acquired. When your Chairman and Directors visited the property [illegible] than a month ago [illegible] company was 75 feet wide with [illegible] of a boundary wall, while the work done along the lode justifies the belief that the lode will prove not less than 100 feet wide right at the [illegible] of the outcrop, which, not improbably, extends further. [illegible] has not been sought.

The mine has been emptied of water, but [illegible] in other mines it proves a costly necessity is here [illegible] to be a positive source of direct profit. For the mine water is [illegible] rich in copper, the assays showing 16 lbs. of copper in very [illegible] gallons. This water is run over crap iron on which the copper content is deposited, so that a [illegible] revenue may be expected from this source. Among other activities of the new company has been the search of consumable water. Boring has already been rewarded by a small supply of good quality, and there is no reason to anticipate that the quantity to be found on the spot will not be sufficient for even the largest developments of the property.

IRON PYRITES

[illegible] of the assets and [illegible] of the [illegible] mention has been made [illegible] the copper. But [illegible] company there is an [illegible] the mine [illegible] to the old, is actually the [illegible] of the [illegible] more valuable to-day. The [illegible] of iron pyrites [illegible] been sold, by the two [illegible] of great [illegible] and [illegible] have been successful [illegible] an eager market. Indeed it is [illegible] that this remarkable deposit will have a [illegible] effect [illegible] on the whole industrial [illegible] agricultural development of South Africa. Iron pyrites is the base [illegible] which sulphuric acid is manufactured. It is required in many industries. It is largely used, for instance, in the Rand gold mines, and it is a requisite of explosives for the production of sulphate of ammonia, of dynamite, of superphosphates and other soil fertilisers which are now recognised as [illegible] necessity of the country's agriculture. The main supply of this necessary industrial commodity has of late years come from Spain. For these reasons it was reasonable to anticipate the cordial, or indeed [illegible] assistance of the Government in the matter, first of transport facilities, and next of rates. The first of these hopes has been [illegible] confirmed, and we are encouraged by the assurance that a new [illegible] from the mine, will be completed by September next.

The disappearance of all transport difficulties has also revolutionised the prospects of the company. The difficulties of the old company has vanished. In place of the 170 miles of road formerly to be traversed by donkey wagon, the brilliant achievement of the South African Railway Department during the recent campaign, carrying the railway line past Upington and connecting with the system of the South West Protectorate debouching at Walvis Bay, has brought our mine into easy reach of the line. The great value of the output, both for the agricultural and industrial needs of the country, has naturally engaged the attention of the Railway Department which looks to the paying traffic of the new line, so that the branch connection with the mine, an easy distance of eight miles over country offering no obstacles—was an inevitable development of the national economical policy. For the old company transport of ore to any point of the coast cost about £7 a ton. To-day we can rail copper to the coast at 17s. per ton, pyrites at 15s., plus the 10s. for transport to the rail at Upington. When the eight miles' branch line from the mine is completed—a matter of a few weeks' work—this latter charge, too, will disappear.

THE IMMEDIATE MARKET.

These new conditions have determined the policy of the board. The practically unlimited store of pyrites certainly adequate in quantity for all African needs—will be one of the main supports of the mine, enriching the country, creating further and greater demands, and providing a steady and profitable revenue. A contract is now about to be concluded with one of the leading South African explosives factories, the requirement being from 1,500 to 2,000 tons of iron pyrites per month. In order to meet this demand, work is being pushed on rapidly, and by the beginning of September the mine should be ready to discharge the quantity required. Other negotiations are afoot, too, with other explosives factories and with other industrial enterprises. Of these current negotiations the moment has not yet come for further publication, but the directors would call the attention of shareholders to the fact that in these immense and readily accessible deposits of pure pyrites we have a not less unique geological phenomenon than the superb diamond mines, the spacious coal measures, and bounteous gold reefs of this singularly endowed country.

While attention has been focussed on this portion of the company's resources, the original purposes of the mine have not been neglected. The great surface deposit of copper ore will be fully exploited, and it is the aim of the board to erect a smelting plant capable of treating a large daily tonnage. The rare purity of the ore, which is smelted with facility, ensures a large revenue for many years. It will be seen then, that your property promises to develop into a great and valuable mine of copper and pyrites, and it is difficult to estimate the magnitude of its national and industrial importance. When the cost of transport 17s., against £7 for the old company—and the high price of copper—£90, against £45 for the old company—are considered, together with the new markets for pyrites, there is no need for further emphasis. Meanwhile it is the aim of the board to keep the capital as low as possible, so that shareholders may be assured of the greatest benefit.

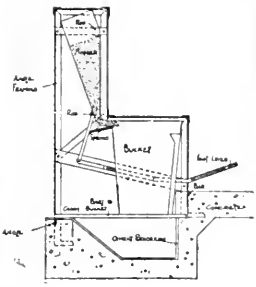
The circular is signed by Mr. Langkilde, chairman of the company, and the following directors, Messrs. F. E. Rivas, W. A. Fletcher, P. F. Windsor, and Mr. J. S. Richardson, the secretary.

The capital of the company is £55,000 in 55,000 shares of £1 each, and the office is at 151/2, New Stock Exchange Buildings, Johannesburg.—(Advt.)

WRIGHT'S ROPES.

Improved Sanitation Underground on the Rand.

THE O'BRIEN IMPROVED PATENT DRY EARTH CLOSET SYSTEM.



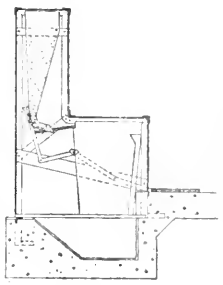
SECTION showing Hopper and Gearing in position of rest, or immediately after foot lever has been released.

The O'BRIEN Premier Dry Earth Closet System has undoubtedly proved itself to be the PREMIER of all dry earth systems, and only requires to be known on the mines to secure its general adoption.

THE PRINCIPLE OF THE SYSTEM IS THE SEPARATING OF THE LIQUID FROM THE SOLID OR FŒCAL MATTER, which is done by mechanism inside the pan. The Liquid is run into a chamber under or near the pan, which chamber is partly filled with a chemical absorbent preparation, and combining with the preparation thereby forms A PERFECTLY PURE, ODOURLESS SOLID, or by other means treated and allowed to flow away pure. The fœcal matter in the pan is automatically covered with a chemically prepared ash, rendering it absolutely odourless, and can be hoisted to the surface and carted away in open carts during the daytime.

The system itself is far superior to any other dry earth system, and has been largely ADOPTED BY THE SOUTH AFRICAN RAILWAYS and by the NEW SOUTH WALES GOVERNMENT FOR ALL BUILDINGS where no sewerage scheme is in use, also by MANY LEADING PUBLIC GENTLEMEN OF SOUTH AFRICA. In simplicity, cleanliness, and convenience it is far ahead of present practice.

Mr. DITCHFIELD will be happy to enter into Special Arrangements with Mines, Municipal and other Public Bodies, and, on application, will furnish estimates, and, if required, designs for the installation and maintenance of the system.



SECTION showing Hopper and Gearing in position while in use.

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THE WEEK IN THE SHAREMARKET.

The Shadow of Liquidation—Springs and State Mines Firm.

	Thurs 21st	Fri 22nd	Sat 24th	Mon 25th	Tues 26th	Wed 27th	Thurs 27th.
Brakpans	£7	£7	£8 6*	£8	£8 6*	£8 5*	£8 5*
Bantjes	5*	5*	5*	5*	5*	5 6*	5 3*
Van Wests			12 6*	12 9*	12 9*	13 9*	13 9*
Van Ryn Deeps	15 3	1 11	14	15 1*	15 6*	15 6	15 6
Van Ryn Deeps						40 0*	40 0*
Geduld Mines	77 6*	77 6	78	78 0*	78 6*	78 6*	78 6*
Bonanza Gold						18 0*	18 0*
Prince Eud Tins	£7	£7	£7	—	—	0 7*	0 7*
Rand Collieries		5 6*	5 6	6	5 6*	5 6*	5 6*
Rand Coal Subs.	31 6*	32 6*	33 0		33 6*	33 0*	33 0*
Rand Deeps		76 6*	75 6*	76 0*	75 6*	74 3	
Rand Mines	1			0*	8 0*	8 0*	8 0*
Rand Mines Construction	1 0*				—	—	
Rand Mines Investments		1		2* 6	2 6*	16 0*	16 0*
Rand Nucleus	25 6	25			26 6*	27 0	
Robinson Mines	19	17 6	17 6*		17 0	17 9*	
Robinson Mines Selection		1	1		17 9*	17 6*	
Rose Deep Ltd.					29 6*		
Rose Deep Ltd. Preference							
Rose Deep Exploration Syndicate							
Rose Deep Diamonds							
Rose Deep Consolidated					2 6*		
East Rand Generals	5 6*	6			5 3*	5 6	
East Rand Coals	3 5*	3 6	3 6	3 6*	3 0	3 0	
East Pond Deeps			1	1 3*	1 3*	1 3*	
East Rand Mines	12 6*	12 6					
East Rand Props	13 6*	13 5	13 6*	13 6*	14 5*	13 6*	
East Pond Debtures	£72 *	£72 *	£	£	£72 *		
East Goldfields	1 6*	1 6*		1 6*	1 6*	1 6*	
East Deeps					28 6*	—	
East South Deeps		1 11*	1 11	1 6*	2 0*	—	
East Props	41 3	41 3	1 5	0*	41 0	41 5*	
Geldenhuis			1		1 0*	1 0*	
Geldenhuis Deeps					—	6 6*	
Geldenhuis Estate					13 6		

Buyers. Sellers. Ex Dividend.

	Thurs 21st	Fri 22nd	Sat 24th	Mon 25th	Tues 26th	Wed 27th	Thurs 27th.
Geldenhuis Est	£3	£3	£3 0	£3 0*	£3 0*	£3 3	£3 0*
Jagers	£9	£7	£7 6*	£7 6*		£6 6	£7 9
Kleinfontein	£5*	£5*	£5*	£5*	£5*	£5 0	£5 0*
Knights Deep	£10	£12	£13	£13	£13 6	£12 9*	£12 10*
Knights Central	£0*	£1 0*	£1 0*	£1 0*		£1 1*	£1 0*
Lace Props	£6	£5	£5	£5 0*	£5 0*	£5 5*	£5 2*
Lydenburg Plats	£9*	£9	£9*	£9*	£9*	£9 6	£9 6
Main Reef Wests	£6*	£6	£6	£6*	£6	£6 6*	£6 6
Meyer and Charlton						£10 0*	£10 0*
Meyerton Est			£1	£1*	£1	£1 1*	£1 1*
Modder B	£0*	£27	£23	£27	£27	£27	£27 6*
Modder Deeps	£25	£27 6*	£27 6*	£23	£27 6*	£27 6*	£27 6*
Langlaagte Ests	£5	£4	£4	£4*	£4	£4	£4 0
Natal Navigation	£6	£6		£6	£6	£6 9*	
New Bantjes	£6*	£6	£6*	£6*	£6	£6	£6 6*
New Eland Dev	£0*	£0	£0	£0	£0	£0	£0 0*
New Era Cons	£0*	£0	£0*	£0	£1*	£1	£1 1
New Goldfield Deeps	£10*	£9*	£10*	£10	£9*	£9	£9*
New Heriots					£6	£6	£6*
New Kleinfontein	£9*	£5	£6*	£5*	£5*	£5*	—
New Primrose			£0	£0*	£0	£0	£0 6*
New Unions			£9	£6*	£9	£6*	£9 6*
Nourse Mines			£12	£6*	£12	£6*	£12 6*
Premier Pets	£0*						
Pretoria Cements	£3	£3	£2	£2*			
Princess Estates	£1	£1*	£1	£1*	£1	£1*	£1 1
Rand Collieries	£6	£6	£3	£3	£3	£3	
Rand Klips	£7	£7	£7	£7	£7	£7	£7 3*
Rand Mines	£6	£6					
Rand Nucleus	£1	£1*	£1	£1*	£1	£1*	£1 1*
Randfontein Deeps	£3	£10	£3	£3*		£3	£3 6*
Randfontein Estates	£11	£6*	£11	£11	£11	£11	£11 0*
Roodepoort	£10	£9	£10	£9*	£11	£11	
Roodepoort Uniteds	£8	£8*	£8	£8*	£8	£8	£8 9*
Ryan Nigels	£2	£2	£2*	£2	£2*	£2	
Sheba	£2	£0*	£2	£0*		£2	
Simmer Deeps	£1	£10	£1	£1*		£2	£2 0*
S A Breweries	£9	£9*		£9	£9*	£9	£9 6*
S A Lands	£1	£1*	£1	£1*	£1	£1	£1 1*
Springs Mines	£51	£0	£52	£53	£53	£53	£54 0
Sub Nigels	£16	£6	£16	£16	£16	£17	£17 3
Trans Coal Trusts	£63	£0*	£63	£64	£64	£64	£61 6*
Transvaal Lands	£15	£0*	£15	£0*			£15 5*
Transvaal Mines Estate			£25	£5*		£26	£22 5*
Van Ryn Deeps	£6*	£6	£6	£6*	£6	£6	£6 6
Village Deeps							£0 0*
Village Main Reefs	£2	£6*		£7	£6*		
Wemmer	£1	£5*	£1	£5*	£1	£1	£1 5*
West Rands							£0 0*
Western Rand Est			£1	£0*			£1 0*
Witbank Collieries	£0	£0	£0	£0*	£0	£0	£0 0*
Witwatersrands			£0	£5*	£0	£1	£1 0*
Wit Deeps	£3	£3*	£3	£3*	£3	£3	£3 5*
Wolhuters	£3*	£3*	£0	£3*	£0	£0	£0 6*
Zaaiplaats Tins	£3	£0	£7	£7	£7	£8	£8 3

ANSWERS TO CORRESPONDENTS.

All inquiries addressed to the Editor must bear the writer's name and full address. We cannot reply to inquiries by letter, but telegrams with replies prepaid will be answered. Correspondents are requested to write their names and pseudonyms distinctly.

"Far East."—The prospectus, we understand, has been withdrawn, and something less objectionable substituted.

"Copper."—The official circular, appearing as an advertisement in this issue, answers your questions. We cannot pretend to understand the market fluctuations.

"Zaaiplaats."—Mr. W. Gau has resigned from the board of the Zaaiplaats Company. The other Johannesburg gentleman remains on it.

"Anxious" (Capetown).—(1) Hold. (2) No truth in the rumour; better hold on.

"Boksburg."—We have no doubt the secretary would allow you to peruse Mr. Denny's report, if you apply to him direct.

"Shareholder."—You could scarcely improve on your selection.

THE WEEK IN THE MINING MATERIAL AND ENGINEERING TRADES.

Business Still Exceptionally Quiet—Widespread War Conditions Making Themselves Felt Even in Johannesburg—£100,000 for South African Industries—The Substitutes for Oversea Timber.

It is rather difficult to hit the happy mean as regards the mining material trade, as business is reported from all quarters to be dull and disappointing—certainly not any better than last week. The mines are buying just sufficient to rub along with, and contracts are conspicuous by their absence. The fact is that we are really feeling the effects of the extraordinary widespread war conditions, and it is marvellous that we have not felt them so badly before. One of the conditions previously mentioned in these notes was that the British Government were not renewing their war contracts, expiring on June 30, without keenly scrutinising the many, and not attempting to renew others, particularly those running in America, etc. As a proof of this, detonators have dropped in New York from 92s. 6d. to 32s. 6d., and some other things have been offered for forward delivery at about pre-war rates. The dearth of business, outside mining circles is also exceptionally marked; in fact, a broker remarked that, we seem to "drop on" these indifferent times without being able to account for them. However, one feasible reason was offered—viz., that the higher price of some material prevents much business. For example, a farmer who is asked 1s. per foot for galvanised roofing iron by a country storekeeper, not only grumbles, but puts it buying until he is compelled, and then only very sparingly. Obviously, this class of business at such high rates is not always advisable to push because of the customary long credit conditions.

The Metal Traders.

A word of warning will not be out of place to purchasers of second-hand scrap metal, particularly brass and copper, as several Police Court cases have revealed the fact that young white boys, inter-mixed with the Kaffir element, have been deliberately knocking off valuable copper and brass fittings at mines and other places, and selling them to second-hand dealers. The Magistrate, dealing with one case, strongly emphasised the fact that the purchasers from such young boys and natives must have been cognisant that the sellers did not come by the metal by fair and square means.

The copper market in London is gradually recovering after the decided slump consequent upon the manipulations engineered in the New York market. However, as regards electrolytic copper the latest cables indicate that present values in London are anything but solid as the price is £124 cash, and £120 for three months' delivery.

The tinplate manufacturers in South Wales are refusing orders, although record prices are ruling, as tinplates are 37s. a box, as compared with 13s. before the war. The disquieting feature is that America is fast getting hold of the tinplate markets hitherto monopolised by the British. However, this is not surprising as so many tinplate works have joined the forces that mills have been closed down in consequence, and others have of necessity restricted outputs. The price of tin on the London Metal Exchange seems uncertain, as it is about the same price of £166 for spot cash, as well as for three months' delivery. English lead has steadied itself, as the price is now £28, as compared with £30 in the middle of June. In the interval it went much lower.

The Timber Trade.

The Oversea Timber trade is in an awkward position, as one leading merchant remarked, as he had a big quantity lying at a Norwegian wharf, already paid for in cash and, according to his latest cable advices, there seemed little or no chance of obtaining the necessary shipping. Another importer stated that the difficulty in gauging the position was not a question of the values for the timber, but the one of freight, which is now about £20 the standard, as compared with £3 under normal conditions. Hence, to-day, if timber is purchased in Norway and the freight and other incidental charges added, deals could not be sold in Johannesburg under 1s. 4d. to 1s. 6d. per foot.

The decided check in obtaining consignments of pine from the Baltic has created a desire on this side of finding a substitute, as the mines are keen buyers of the Baltic article, as it is well-seasoned, therefore not liable to bend or warp and, moreover, is easy and clean to work, as it has a minimum amount of knots and splinters. With the object in view of how far we were making progress, a visit was made to Newtown and other sawmills, where it was said some progress was being made with Cape pinewood. However, whilst the visit was interesting and instructive, it was a bit disappointing as regards finding a practical substitute for the almost ideal Baltic pine. Nevertheless, the Cape pine was being more carefully handled in the way of sawing it into boards, which were being used for outside work in connection with farm outhouses for cattle pens, forage stores and such like erections. It was also ascertained that Cape pine answers fairly well for the rougher class of boxes and packing cases, which can be turned up quickly, or where not much store is placed upon them, to be used over and over again. The Cape pine is not large enough to make log-timber for construction work on the mines; but, in this respect, the best and largest of mining poles are sawn, to enable the wood to supplement the Baltic pine; that is when a certain quantity of the Baltic is used, some of the Cape hardwood and pine come in for excellent fillings.

As regards mining poles, it was gleaned that they are now coming from all parts of South Africa—viz., so far away as the Wynberg line, near Capetown, the Paarl district and Worcester. On the eastern line from Alexandria, near Port Elizabeth, the Northern Transvaal, and all parts of the Delagoa Bay line. Owing to this "dead set" at our ready money market, the price of mining timber has eased off, for, although the recognised standard value is about 36s. per ton on the average, yet the recent traders to the mines disclose the fact that it nearer 32s. 6d. per ton.

Iron, Steel and Hardware.

There is no alteration in values. Generally speaking, the high-class steels are anything but plentiful, particularly in some sizes of turned shaftings; however, it is said there is plenty already on the water from London. The plumbing trade is slow in their ordinary work of making tanks, water spouting, and so forth; but it appears that some of the shops are quite busily engaged with embossing steel and metalplates, for the purpose of making motorbicycle sidecars.

The Slate Industry.

At one time it was anticipated that the town's sidepaths would be paved with slates, but the granolithic blocks, made with South African cement came as a strong competitor. Therefore, the slate people have been turning their attention to making tanks for chemical receptacles, and for other

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[illegible] proposal [illegible] mines [illegible] to town. Recently a [illegible] has been opened by a Newtown bacon and ham-[illegible] for supplying slate vats for salting and curing [illegible] Western hams and bacon.

The Financing of South African Industries.

A [illegible]t, unassuming, advertisement appeared in the daily [illegible]s Monday last, to the effect by the name of one of the most [illegible] accountants in Johannesburg, offering £100,000 [illegible] South African industries capable of profitable [illegible]. This is most encouraging at this opportune [illegible], as [illegible] may have ventured upon their own ini-[illegible] to supply [illegible] which has been difficult to [illegible] from the customary sources Oversea. Take one ex-[illegible] to illustrate the subject. It was almost impossible a [illegible] months ago to obtain 11lb. drill hammers when a start [illegible] Rand, both here and Pretoria to make them out of old [illegible] types. This has proved a sufficient success to reduce [illegible] price from 7½d. to 6½d. per lb. of the imported article. [illegible] lay's [illegible] to in abundance in Johannesburg as a [illegible] and [illegible] who had never dealt in ham-[illegible] have made a special point of importing these ham-[illegible] from here, there and everywhere, hence a super-abun-[illegible] now available. Returning to the subject of this £100,000, one of the conditions is that applications must [illegible] particulars of the concern as to its past results; there-[illegible] anything like hare-brained schemes will have no [illegible] until some work and initiative is put into the con-[illegible] by the applicants. Now the question will soon arise [illegible] what "they" have done, but what "we" are doing to [illegible] the interests of our local industries.

Revised Price List.

Approximate war prices, subject to quick change.—Mining and building hardware: Iron, imported, round up to 1 in., 30s.; 1¼ in. to 2 in., 13s. 6d.; 2¼ in. to 6 in., 25s. per 100 lbs. Do., square, up to 1 in., 27s. 6d.; 1¼ in. to 2¼ in., 13s. 6d.; 2½ in. to 5 in., 25s. Flats, 3-16 in., 37s. 6d.; all from ¼ in. up, 25s. Angles, ½ in. to 3-16 in., 30s.; ¼ in., 27s. 6d.; 5-16 in. to ¾ in., 25s., excepting 5 x 4 x ⅜in.; mild steel bar, 4½d. lb.; drill, 7lb.; steel plates, 10ft. by 4ft. by 1-16th in., 35s.; ⅛in., by 3-16in., 32s. 6d.; ¼in. to 5-16th in., 31s.; ⅜in., up to 30s.; 10ft. by 5ft. by 1-16in., 36s. 6d.; ⅛in. and 3-16in. 34s.; ¼in. to 5-16in., 32s. 6d.; ⅜in., up to 31s. 6d.; intermediate sizes up to 12ft. by 6ft. by 1-16in., 37s.; ⅛in. and 3-16in., 34s. 6d.; ¼in. and 5-16in., 33s.; ⅜in. and up 32s., all at per 100lb.; hexagon and cuphead bolts, ⅜in. diameter to 2½in., 55s., over 2½in., 5s. 6d., ⅝in. to 2½in., 50s., over 17s. 6d., ¾in., ⅞in., 1in., up to 2½in., 45s., over 12s. 6d.; nuts, ⅜in., 10d. lb., ½in., 60s., ⅝in., ¾in., 57s. 6d., 1⅛in., 1¼in., 62s. 6d., 2in., up, 67s. 6d.; washers, all sizes, 15s.; rivets, 3-16in., 1s. lb., ¼in., 5-16in., 10½d., 7-16in., ⅜in., 7½d., ½in., 45s., ⅝in., 42s. 6d., ¾in. up, 40s. lb.; shoes and dies, 32s. 6d. to 35s. per 100lb.; rails, £23 per ton; picks, 4lbs., 27s. per dozen; shovels, 32s. 6d. to 50s. per dozen; hammers, drills, 6½lb. to 9d. lb.; hammer handles (best American), 14 in., 3s. 6d., 24 in., 5s. 6d., 30 in., 7s. 6d., 36 in., 10s. 6d. per doz.; metal, anti-friction, 1s. per lb.; galvanised iron, 24 gauge, 6 ft. to 10 ft., 10d., 11 ft. 10½d., 12 ft. 10¾d.; 26-gauge, 6 ft. to 10 ft., all lengths, 8½d. to 9½d. per ft. all-round; flat galv., 18 to 24 gauge, 32s. 6d.; 26 gauge, 34s. 6d. 100 lbs.; floor brads, 30s.; ceiling, 30s.; wire nails, 30s. to 35s. per 100lb.; solder, 50 per cent., 1s. 2d. per lb.; locks, rim, 18s.; mortice, 60s. dozen; barbed wire, 22s. 6d. to 25s. 100lb. coil.

Timber: Deals, Baltic, 9 x 3, up to 16 ft., 1s.; over, 1s. 1d. to 1s. 3d. (Oregon, 11½d.); flooring, 1½ x ⅝ and 6 x ⅞, 6½d. to 6½d. per sq. foot; do., 4½ x 1½, 7d.; and 6 x 1⅛, 7d.; Oregon edge grain, 6d. to 7½d.; ceilings, 6 x ½, 3⅜d. to 3¾d. per sq. ft.; Oregon, 4 x ½, 4½d.; pitch pine, 7s. 6d. to 7s. 9d. per cub. ft.; Oregon, 5s. 6d. to 6s. per cub. ft.; clear pine, ½in. x 12in., 7½d. per foot; 1in. x 12in., 8½d.; teak, small planks, 14s. per cub. ft.; do., large, 15s.; jarrah, 8s. 6d. per cub. foot; poplar, 1in. x 12in., 9½d.; scantling, 9 x 3, 1s. to 1s. 3d. per foot.

Bricks, cement, lime, etc.: Cement, nominal, 34s. 6d. per cask; Pretoria Portland, 9s. 3d. per bag; 8s. 3d., truck loads; lime, white, 7s. 9d.; truck loads, 6s. 9d., slaked; do., 5s.,; blue, 3s. 6d.; plaster lime, 4s.; bricks at kiln, stock, 30s. to 42s.; wire cuts, 40s. to 50s. pressed, 65s. per 1,000, road transport getting scarce; salt and white glazed bricks, £27 10s per 1,000; tiles, roofing, £17½ square; glazed tiles, 10s. 6d. to 17s. 6d. yard; paving cement tiles, 8s. 6d. yard laid; terra cotta tiles, £15 per 1,000; reinforced concrete columns, 6 ft. plain, 22s. 6d., fluted, 24s.; fireclay bricks, £9½, good average, per 1,000; clay chimney pots, 80s. per doz.; fireclay, 37s. 6d. ton on rail.

Oils, paints, lead, oxides, glass: Linseed, raw, 27s. 6d.; boiled, 27s. 6d. per 5-gall.; white lead, 70s. to 72s. 6d. 100 lbs; turpentine, 52s 2/4 galls.; 10/1, 57s.; coal tar, imported, 10s. to 12s. 6d. per 5 galls.; oxide in oil, 30s. to 35s. per 100 lbs.; dry oxide, 21s. to 22s. 6d.; S.A. crude oxide, 12s. 6d.; linseed oil putty, 4s. 6d. per 12½ lbs.; bladders, 35s. casks of 100lbs.; grease A.F. axle, 23s. 6d. to 25s. per 100 lbs.; tallow, 1s. per lb.; White Rose paraffin, 16s. 3d. 2/5; Laurel do., 16s.; petrol, 26s. 6d. 2/4; motor oil, 6s. to 7s. 9d. per gallon; engine lubricating oils, 19s. to 32s. per case; cylinder, 20s. to 35s.; paints in tins, 10d. to 1s. per lb., according to quantity, and if ordered to be mixed, 20 per cent. on pre-war rates. British plate-glass, ⅛in., 3s. 6d.; do., mirror, 4s. 6d.; window, 16oz., 1s. to 1s. 3d. foot.

Chemicals: Mercury, £18¾ per 75 lb. bottle; bichromate potash, 2s. 6d. lb.; chlorate, 2s. 6d. lb.; permanganate, 9s. lb.; alum, 5d. lb.; carbolic acid, 7s. 6d. lb.; borax, 85s. 100lbs.; cyanide soda, 1s. 5d. lb.; hypo, 6d. lb.; acetate lead, 70s. 100lb.; litharge (assay), 75s. (commercial), 55s. 100lbs.; zinc sheets and blocks, 1s. 3d. lb.; plumbago crucibles, 5d. per number.

Electrical Goods: Lamps, high volts., British, Holland & American, 16s. to 21s. wholesale, and 21s. to 27s. dozen, retail; carbon lamps, 7s. 6d. per dozen; pure rubber flex, 6d. to 8d. per yard; 3/20 coils of wire, 27s. 6d.; do., 3/22, 23s. 6d.; tubing, 12s. to 13s. 100ft.; keyholders, 3s. each; round blocks, 3½ in., 4s. dozen; lamp holder cord grips, 15s. doz.; switches, 5 amp., 13s. to 14s. doz.; British glass shades, 24s. to 36s. doz.; Bohemian shades finished; porcelain shackles, 14s. 6d. doz.; do., bobbins, 9s. 6d. to 10s. 6d. 100; cleats, 18s. per 100; P.O. insulators, 18s.; motors, 3 h.p., about £28 to £35, new.

Brakpan Mines.

The Directors' quarterly report for the period ended 30th June, 1916, shows:—Development Work.—The linear development for the quarter amounted to 5,196 feet, of which 3,980 feet were on reef, averaging 13.13 dwts. over a reef width of 35.55 inches. Of the footage on reef 1,970 feet were in payable areas and averaged 24.20 dwts. over 36.29 inches. Ore Treatment. The following were the results obtained from reduction operations during the quarter:—Milling.—Ore hoisted from mine, 202,880 tons; ore from surface dump, nil; ore sent to crushing and sorting station, 202,855 tons.; percentage of waste sorted out, 12.092 per cent.; average number of stamps running, 140 stamps; net running time, 77.470 days; ore milled, 178,900 tons; milling duty per stamp per 24 hours, 16.495 tons; yield in fine gold, 39,690 ozs.; yield per ton milled in fine gold, 4.437 dwts. Cyaniding.—Tons treated, 179,486 tons; yield in fine gold, 26,284 ozs.; yield per ton treated in fine gold, 2.929 dwts. Summary.—Yield in fine gold: Mill, 39,690 ozs. (4.437 dwts. per ton milled); cyanide works, 26,284 ozs. (2.938 dwts. per ton milled); total, 65,974 ozs. (7.375 dwts. per tons milled).

COMPARATIVE QUARTERLY RETURNS OF WORKING EXPENDITURE AND REVENUE ACCOUNT.

Period 1916.	Gold Recared.			Working Expenditure.		
	Ore Milled Tons.	Fine Ozs.	Fine Dwts per ton Milled.	Amount.	Per Ton Milled.	
1st Quarter ending 1st March	186,800	64,708	6.928	£173,754 7 0	18 7.24	
2nd Quarter ending 30th June	178,900	65,974	7.375	172,618 6 7	19 3.57	
Totals and averages	365,700	130,682	7.147	£346,372 13 7	18 11.32	

Period 1916	Working Revenue.				Working Profit.			
	Amount.			Per Ton Milled.	Amount.			Per Ton Milled
1st Quarter ending 31st March	£272,165	5	4	29 1.63	£98,412	16	4	10 6.44
2nd Quarter ending 30th June ...	277,547	2	6	31 0.34	104,928	15	11	11 8.77
Totals and averages	£549,715	6	1	30 0.77	£203,342	12	6	11 1.45
	*5,171	15	7		5,171	15	7	
	£544,543	10	6		£198,170	16	11	

Less.—Further provision during six months ended 30th June, 1916, for gold realisation charges due to war

Note.—No allowance has been made for profits tax or special war levy.

Finance.—After providing for profit tax, special war levy, and interim dividend No. 9, the estimated unappropriated profit at 30th June stood at £86,514, being an increase of £4,965 on the figure at 31st December, 1915. Expenditure on Development for the six months was more than covered by the fixed charge to working costs of 2s. 3d. per ton milled. Capital expenditure incurred during the six months to 30th June amounted to £2,184, which was provided out of the unexpended credit balance of funds appropriated for capital expenditure. The amount standing to the credit of this account at 30th June, 1916, was £9,224. General.—An interim dividend (No. 9) of 22½ per cent. (4s. 6d. per share) was declared on June 16, 1916, payable to shareholders registered in the books of the company at June 30, 1916, and to holders of bearer warrant coupon No. 9

Sakalava Madagascar Prop. Oil Fields, Ltd.

At the first meeting of the new Board of Directors Mr. George D. Alexander, of Pietermaritzburg, was elected Chairman of the Board. A cable has been received from the fields manager in Madagascar to the effect that within the last fortnight No. 4 well has been deepened by 360 feet, making the total depth of the borehole 860 feet. He also sates the formation is white sand, and expresses satisfaction with the indications. It is, we understand, the intention of the Board to proceed vigorously with other boring operations so soon as additional experienced drillers can be obtained, and the necessary arrangements made.

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Engineering Notes and News.

The Swazi Tin Electrical Plant.

By Mr. W. Elsdon Dew.

I regret that this descriptive paper did not bring forth more discussion. The introductory remarks which I made at the beginning of the paper, in reference to the amount of water power running to waste on the eastern slopes of the Drakensberg range of mountains, in suitable latitudes, and are easily passed over, but I am convinced of the importance of the undeveloped resources of South Africa is in front of everybody's attention. I am sure nothing can be gained by sitting still, and the British nation as a whole has to be informed of the possibilities in the colonies. The development of the resources of a country cannot nowadays be left to private enterprise, and this is a moment which is just now exercising the minds of technical men to an immense importance. We cannot ignore its far reaching effects. It appears that we cannot look further ahead than just what gold mining is doing for South Africa, and my object in placing a description of what has been done in the recovery of tin at Mabaine is of immense importance. It is not in the province of the electrical engineer to investigate the payability of mineral propositions, but the achievements of electrical engineering should be made known so that the latest improvements in the operation can be applied, and the exploitation of mining concerns not be handicapped by not being up-to-date in the advantages to be obtained by the use of electrical power.

Where water power is available, electrical transmission of power is made for great flexibility in working of what previously had to be done in a very primitive manner. I would like to mention that in the development of water power schemes it should not be lost sight of that, during such part of the year when water is plentiful in most parts of the Transvaal, this period extends to probably eight or nine months of each year, that consideration should be given to the use of the extra power for electro-chemical purposes. As you may be aware, the fixation of nitrogen by electrical means is now a simple process, and I see no reason why power stations, and especially water power stations, should not use all the generating plant up to full load capacity in the production of by-products. What would it mean to have the power transformed into nitric acid. Just now I feel that the production of this important ingredient of munitions would be a most helpful thing for the British Government. In this way electrical engineering will make for beneficial use of what is now running to waste, and with water power plants the extra cost of the power would be insignificant. In the case of this electrical power plant it is to be noted that the load factor for the year ending 30th June, 1915, was only .4283. I may mention one or two items of experience which may add to the interest of this plant.

Transformers.—The transformers have given practically no trouble, although they are comparatively hot at full load. When hot the insulation resistance of these transformers drops considerably, and I mention the fact so that it must be recognised that the insulation used in a transformer, in the formers and spacing pieces, is of some importance.

Power Line Poles.—The President asked if any trouble has been experienced with the wooden poles. It has been found that white ants do not attack the wooden poles if they have been creosoted; precaution was also taken to bore a small hole, about two inches deep, into the wooden pole, just above ground level, and into this hole periodically a little paraffin was poured. This kept the white ants away. It has been found that the blue gum pole has a very short life, and if the tree is under five years old, that is, that it has been growing less than five years, then the wood does not last. The green sap has a very deteriorating effect, and the pole is attacked with dry rot, snapping off without warning. We are now using black wattle poles, all over five years old, which it is hoped will have a longer life.

Aluminium Wires.—The use of aluminium wire has been quite justified, and although the wires now appear to require tightening, this is only what is to be expected. I have here some pieces of aluminium wire which have been cut from overhead wire at a clamped T joint. This T clamp was supplied with the wire for the tappings off, and although apparently still tight, the imperfect joint has caused arcing or fusing, which still further spoilt the joint, and ultimately had to be replaced. It shows the importance of having a large area for clamped joints on aluminium wires, especially on a stranded cable, where the contacts are on the top wires only.

Mr. J. Jervis Gerrard's contribution to the discussion on this paper is somewhat in the form of supplementary information, and in this he gives the generating costs of what may be considered an exceedingly small station, viz., 0.3672d. per unit. I think this definite statement must dispel all doubt as to the cheapness at which electrical power can be generated, even in small plants, and if large plants are at work the figures for costs will be materially less. I beg now to thank you for your kind attention.

The President: I am sure we are indebted to Mr. Elsdon Dew for giving such a full reply to his paper. I would emphasize the figure of cost, 0.3672d with a load factor of 0.4283, which shows what is practicable with water power even for small schemes. With regard to the trouble on the aluminium conductor, I think this can well be discussed under item 7 on the agenda, "Consideration and Discussion of Items of Practical Experience." I have seen the sample referred to, it was a stranded aluminium wire with tappings taken off at right angles by means of aluminium clips. Some of the wires were nearly eaten through, showing there had been arcing from one to the other. As most of you no doubt know, when aluminium oxidises an insulating film is formed that will stand a pressure of some 1,500 volts. Possibly moisture getting under the clip makes a certain degree of contact with some electrolysis, while, on drying, the film of oxide formed between the surfaces increases, requiring a small arc to carry the current across, this arcing once established, must, by further oxidation, gradually increase in intensity.

Reply to discussion on paper read before the South African Institute of Electrical Engineers.

Diamonds and the War.

On the question as to what is the cause of the increase in the price of diamonds since the outbreak of "the war," "The Times" special correspondent at Amsterdam, which, as is well known, is the world's principal centre of diamond cutting and polishing, has interviewed some of the leading experts in the diamond industry. He first approached Messrs. Asscher, the largest firm of diamond cutters and polishers in the city, to whom King Edward entrusted the cutting of the Cullinan diamond. Messrs. Asscher explained that the demand now exceeds the supply. They said that the London Diamond syndicate and the Premier Company, which with the Vaal River alluvial washings provide the raw material for the diamond cutting and polishing industry, informed the trade that there was a dearth of rough diamonds owing to a deficiency of labour in the mines occasioned by the war. Messrs. Asscher added that many members of the public, as well as of the trade, were buying diamonds, being convinced that they were a convenient and safe form of investment at a time when many of the world's ordinary securities had declined in value. Messrs. Asscher and other members of the community in Budapest are investing in diamonds. And several diamond merchants from Germany and Austria have recently visited Amsterdam for the purpose of making purchases. The opinion of Messrs. Asscher as to the cause of the phenomenon is shared by Mr. Hartz, Secretary of the Diamond Manufacturers' Association, and Mr. Polak, President of the Diamond Workers' Union. They pointed out that the public is apt to think of diamonds as precious stones employed exclusively for personal adornment, whereas their industrial uses are many and important. Everyone has heard of the glazier's diamond, but its employment for glass-cutting represents only a very small part of the application of the diamond to industry. Diamonds are needed for drilling and sawing blocks of hard stone, such as granite, for truing emery and other wheels used for grinding the hardest steel tools, for drilling holes in very hard steel objects, and for cutting wire for electric lamps. They are also employed in mining operations and in boring tunnels. The amorph us diamond is known as Brazilian carbon are extensively employed in these operations. This substance, which is black, and resembles coal in appearance, is, however, extremely expensive and scarce, and for some purposes the South African diamonds, which are much cheaper, are equally applicable. This is one of the contributory causes of the increase in the price of diamonds. The article concludes with a review of the conditions of the cutting industry itself, and the measures taken by the British Government to prevent the exportation of stones from German and Austrian dealers via Antwerp and Scheveningen.

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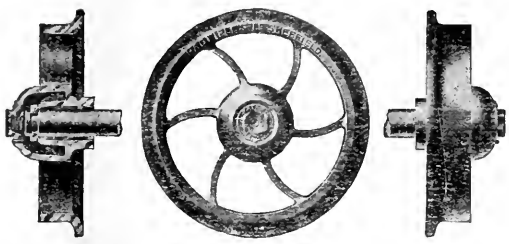

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The Week's Meetings.

GENERAL MINING AND FINANCE.

At the annual meeting of the General Mining and Finance Corporation, held on July 25, Sir George Albu, in moving the adoption of the report of the directors and the statement of accounts, said:—A cursory glance at the accounts as at the 31st of December last would appear to indicate that there has been little change in the affairs of the company during the past year. As a matter of fact, however, there have been developments in connection with certain of our subsidiary companies which are of definite and considerable importance to the future of your Corporation. As regards the general position, we have again been fortunate in that there has been no serious interruption to the importation of the stores and supplies so essential to the maintenance of the gold production of our mines, although, as might be expected in the abnormal circumstances prevailing in consequence of the war, the prices of such stores have materially advanced and have had a very decided influence on working costs. On the other hand, money market and other conditions were obviously such as to absolutely preclude the possibility of raising further working capital for those companies which are in need of funds for either commencing or re-starting active operations on their properties, or for capitalising their liabilities in order to enable them to enter on the dividend-paying stage.

Book Value of Stocks.

The balance sheet refers to the heavy depreciation on the book value of the stocks, shares and debentures held by the corporation, as compared with the market prices ruling at that date. Whilst on this subject, however, I should like to emphasise the remark made in the report of your directors for the past year, that the depreciation in question does not represent a realised loss; the provision of the requisite funds for restarting operations on any of the properties at present dormant—such, for instance, as the Cinderella Consolidated—would be quickly reflected in enhanced quotations for the shares and debentures of that company, in which we hold such a huge interest. In making my customary analysis and comparison of the accounts for the year, I will take the balance sheet first. Deposits at £115,670 show a decrease of approximately £10,500, as compared with the previous statement, representing amounts withdrawn during the year by our subsidiary companies. I may add that since the date of the balance sheet we have repaid practically the whole of these deposits with the exception of an amount of £15,000 standing to the credit of a real estate company in which we hold the whole of the share capital, and which is, therefore, to all intents and purposes a book entry. Bills payable show a negligible liability of £60. Creditors for stocks bought at £7,436 are in respect of current share transactions at the close of the year. Sundry creditors reflect an addition of approximately £51,000, of which a large portion is for moneys received in London on account of alien enemy shareholders, which are held at the disposal of the public custodian. The sum of these variations arising out of the comparison with the previous balance sheet is that our current liabilities show an increase of roughly £43,000.

Investments.

Dealing with the other side of the balance sheet our investments (stocks, shares and debentures) are up by about £31,000 representing the purchases of shares and a participation of £11,000 in the 4½ per cent British War Loan. Mining properties, farm holdings, real estate, etc., at £236,583 reflect a decrease of £2,300, consequent on the abandonment and writing off of certain claims in the Murchison district and options on farms. Advances against securities show a reduction of about £13,000 and sundry debtors of £10,700, in respect of repayments made to us. On the other hand, cash at bankers, including treasury bills, reflects an increase of £51,000 over the position at the close of the previous year. Speaking in round figures, therefore, our assets have increased to the extent of about £58,100, as compared with additional liabilities amounting to £43,300, leaving a net increase of assets of £15,100, which represents the net profit for the year.

Turning to the profit and loss account, administration expenses, after deducting amounts received from the companies, appear at £30,653, which is a diminution of £2,600, as compared with the previous year. The somewhat formidable item of interest, amounting to £38,767, shows an increase of approximately £7,060, which is due to the higher rate prevailing on account of the war. Directors' fees, at £1,000, reflect a decrease of £656. Losses on mining ventures written off totalled £2,309, as compared with £19,304 for the previous year. On the other side of the account, the profit on stocks and shares realised was only £2,245, as against £12,947 for 1914. The small figure of profit under this head illustrates the insignificant volume of our share dealings during the past year, and I may explain that there was naturally no desire on our part to sell stocks at the ruling quotations, which showed a depreciation in most instances to prices far below the intrinsic value of the investments. Sundry revenue at £64,892 yielded an increase of roughly £14,850, as the consequence of additional dividends received. The final result was a net profit for the year of £15,107, which although insignificant in amount, compares favourably with the loss of £2,213 for the previous 12 months, and has been utilised in reducing the debit balance brought forward from 1914 to £30,522.

I will now refer to the affairs of the subsidiary companies under our management and control.

Aurora West United.

With the exception of January, when, owing to a purely temporary fall in grade, the working profit was only £2,767, this company has regularly earned profits during the current year of from £4,000 to £4,500 per month. The larger proportion of this has been utilised in the purchase of additional stores, which have been increased from £7,700 at the close of the past year to over £18,000 at the present time. As regards the future, assuming normal conditions, the whole of the remaining debt due to your corporation should be paid off before the end of next year, after which date the profits will be available for distribution to shareholders.

Meyer and Charlton.

This company has continued its operations on the same highly prosperous scale as heretofore. The working profits so far this year have come out at an average of over £20,000 per month, and an interim dividend has been declared, for the half-year ended the 30th ultimo, of 9s. per share (equal to 45 per cent.), as compared with 8s. per share for the corresponding period of 1915. Development work continues to disclose the very high values on Main Reef leader, which for over a generation have been found associated with this mine. In the 22nd level on leader, the lowest level in the mine and close on the southern boundary of the property, the footage driven and sampled for May and June was 90 feet in the west drive, assaying 12.7 dwts. over 46 inches, and 150 feet in the east drive, going 2.5 dwts. over 46 inches.

New Goch Gold Mines.

Mining operations for the current year have so far shown appreciably improved results as compared with those for the corresponding period of 1915. The working profit for the six months ended 30th June amounted to £57,254, as against a figure of £47,453 for the same months of the previous year, the increase being due to the slightly higher grade of the ore treated. A dividend of 5 per cent. for the half-year ended last month has been declared.

Roodepoort United Main Reef.

In referring to the position of this company at the previous annual meeting of your corporation, a year ago, I stated that it was increasingly obvious that material profits could only be obtained in the event of the lower levels of the Kimberley Roodepoort section of the property yielding better values than in the instance of the upper levels. I am pleased to be able to state that the lower levels have now been developed to a sufficient extent to indicate a very considerable improvement. The ground in question lies between the 16th and 20th level, and it is estimated to contain over 1,250,000 tons of treatable ore on the basis of the South Reef being wholly payable and the Main Reef payable to the extent of 40 per cent. In this area drives, rises and winzes have already been effected totalling 4,400 feet, which is equal to approximately 27 per cent. of the full amount of footage required to fully develop the block as a whole, and this work has disclosed payable values, both on South Reef and Main Reef, over the entire footage driven, etc.; taking the combined figures for the two reefs, the average value is over 8 dwts. on a calculated stoping width of 42 inches. As regards the 20th level, the continuance of excellent values is already indicated by the diamond drill which intersected the reef at the end of May, some 87 feet north of the shaft, and which disclosed a compact body of South Reef of 7 inches, assaying 707 dwts. over that width; this is equivalent to a value of 135 dwts. over a stoping width of 42 inches. The outlook for this property has undergone a complete change for the better during the past six months, and I feel that we may now look forward with confidence to a restoration of the erstwhile successful returns from the mine. The working profits from January, 1916, onwards are as follows: January, £5,501; February, £5,277; March, £6,004; April, £6,027; May, £5,148; and for June a profit of £3,089 was earned.

Van Ryn Gold Mines Estate.

This company still continues its highly successful career, as the following returns of the working profits since the beginning of this year demonstrate: January, £18,156; February, £17,189; March, £19,496; April, £18,199; May, £18,317; June, £17,358. A final dividend has been declared for the half-year ended 30th ult. of 17½ per cent., equal to 3s. 6d. per share, making a total distribution of 35 per cent. for the company's financial year.

West Rand Consolidated Mines.

I have very little to add to the references in your directors' report to this company, which denote steady progress and increasingly large ore reserves accumulated in view of the considerable expansion of milling operations which it is intended to bring into effect after the conclusion of the war, for which purpose ample funds are being conserved. The working profits earned so far this year have been at the rate of approximately £27 per month

Cinderella Consolidated.

Since the date of issue of the annual report of the directors of your corporation Mr. G. A. Denny, the well known mining engineer, has completed his lengthy investigation of the Cinderella Mine, and his full report thereon has been handed in to the board. I cannot do better than quote the final paragraph of my remarks in my speech at the annual meeting of shareholders of the Cinderella Company, held on May 30:—

In summing up the position as it appears to-day, after taking into account the results of Mr. Denny's prolonged investigations the salient points may be stated as follows:—The reefs both on north section and south section possess a larger percentage of payability and higher average values than our previous reports would indicate. Even in what is shown on the block assay plans as stoped-out areas it will be found, owing to the Main Reef leader having been left in the hanging a considerable tonnage of payable ore remains to be extracted. The payable ore reserves in the mine consist of 1,024,800 tons of fully and partly developed rock, of an average value of close upon 7 dwts., instead of 657,000 tons (fully and partly developed), as previously recorded. The ore in sulphides, of which a large portion is likely to prove payable, is calculated at 436,000 tons, as compared with the figure of 207,000 in our previous reports. The abnormally high working costs prevailing during the milling period, and which were entirely due to exceptional working conditions, will not recur, as after the connection of the deep shaft with the new central shaft conditions should be quite as favourable as in the case of the neighbouring mine. Future development should, in Mr. Denny's estimation, be capable of being carried out on easier lines, while opening up a larger tonnage of payable ore than we had been previously advised as probable. The condition of the mine, as found by Mr. Denny, instead of being in a state of chaos owing to its reputed extremely danger us character, is, on the contrary, after being closed down for over two years, quite normal. In fact, Mr. Denny ridicules the theory that there is any exceptional risk whatever in the case of this mine. The whole report goes to show that we were fully justified in effecting the big consolidation of the property some six years ago, and that, with adequate funds to complete the shaft sinking and development programme embarked upon at the time of that consolidation there is no reason whatever why the mine should not prove the sound and payable proposition which many of us have always believed it to be. Whether it will be possible in the immediate future to obtain these additional funds is a question on which I can offer no definite opinion, but I can confidently state that the altered aspects which I am able to place before you to-day will undoubtedly assist us in our endeavours. That eventually we shall recommence operations on this property I have not the slightest doubt.

Rand Collieries.

It may be regarded as practically certain that there will be little or no opportunity for refinancing this company until after the termination of the war.

New Steyn Estate Gold Mines.

The cash resources of this company, amounting to approximately £50,000, is entirely inadequate to justify even the initiation of active operations on the property, which consists of deep level claims requiring a very heavy expenditure in respect of shaft sinking and subsequent development for its proper exploitation as originally intended, the mine to be worked as a separate unit. Alternatively, the situation of the claims is such as to render it eminently desirable in any amalgamation or extension of the neighbouring mines which may be subsequently considered advisable. The satisfactory developments now being met with in the Kimberley Roodepoort Mine must necessarily add to the potential value of the New Steyn ground.

Native Labour.

For the first time in my long experience of these fields the native labour supply for the mines was for several months between the end of 1915 and the early part of this year equal to the demand. As might have been expected, however, that satisfactory position proved to be only a temporary phase and at the present time there are quite a number of mines which are definitely suffering from a lack of this class of labour, and are unable to maintain either the outputs or profits which they would otherwise be in a position to effect. The latest advices from the native territories, however, point to normal conditions of recruiting being again in evidence in the course of the next few weeks.

Miners' Phthisis.

A few months ago a new Act was promulgated by the Union Parliament dealing with the incidence of miners' phthisis, and containing provisions of a far-reaching character. A portion of the enactment provides for a higher scale of compensation than has hitherto been payable to claimants found to be suffering from different stages of the disease. The only material criticism I have to offer in this respect is the new departure of giving compensation to employees suffering from tuberculosis pure and simple. This appears to be a dangerous precedent to establish, inasmuch as tuberculosis cannot be said to be in any way an occupational disease. The question is a very difficult one from a practical point of view, but it, as I personally strongly admit, there is strong cause in support of the sufferer who is taken from his work in order to prevent his infecting his co-workers with tuberculosis, being compensated on the temporary or permanent loss of his livelihood, the compensation should be borne through the Government of the country by the community in general. On the larger point of the desirability of eliminating from the mines and compensating those men who, after medical examination are certified to be suffering from silicosis plus tuberculosis, or silicosis only in an acute form, there can, I think, be no question. We were advised by the highest medical authorities here that this is the only step which can be taken in conjunction with the methods and apparatus for dust allaying which are now in force on the mines generally as likely to eradicate the disease, and for the reason the recommendation was strongly urged in the statement made to the Select Committee on Miners' Phthisis as representing the views of the Chamber of Mines. I should like to add that the carrying into effect of this provision will entail a very considerable burden on us, quite apart from the direct expenditure involved in the compensation to the men concerned. It will probably mean the loss to the mines of a large number of experienced workers, who will be replaced by men who can only be expected to attain a similar degree of efficiency after the lapse of varying periods of training and gaining experience at our cost. Consequently the change is bound to cause disorganisation of work to an extent which it is difficult to estimate at present, but which is certain to be a serious disability. I can assure the men that if, as we are so often credited with doing, we were considering only the question of profits, the recommendation I have referred to would be the last we should be likely to make.

Eliminating the Dust.

Before closing my remarks on this subject, I desire to say that with the object of allaying the dust trouble, and of ensuring as far as possible that the regulations shall be carried out in a practical manner, we have, in addition to the engagement of extra shift bosses, appointed an official on each mine of the group whose duty it is to constantly obtain samples of the dust on working faces and other parts of the mine, and to forward the results to the Chamber of Mines for analysis and report. For this purpose all of the mines have been supplied with suitable apparatus for taking the samples.

White Labour.

It is with pleasure that I am able to again refer to the position of our white employes during the abnormal circumstances in which we are all placed at the present time. Naturally there have been discussions on the question of wages, these presumably will arise until the end of time, as in most other cases where one party to an arrangement has a commodity to sell, and the other to buy, but so far the meetings which from time to time have taken place between the representatives of the mining companies and of the men have been characterised by a more obvious desire on the part of both bodies to discuss differences on an amicable basis than has been apparent for many years previously. There is, however, one very important feature peculiar to the mining industry which is not, perhaps, so fully appreciated or understood by the mine employes as could be desired. Owing to the increased cost of living consequent on the war, many of the skilled artisans in the towns and other centres have received increases in their wages, and similar classes of workers on the mines have pressed for like concessions. The difference between the mining companies on the one hand, and the other employers concerned, such as municipalities, engineering and foundry firms, etc., is that whilst the latter are able to pass on the increased cost due to higher wages to the ratepayers or consumers, as the case may be, we are unable to do so. As a matter of fact, the price which we obtain for our gold product, so far from being higher than in pre-war times, is really lower, owing to the increased cost of realisation by reason of the heavy rates of insurance and freight which we have now to pay through the Bank of England. Then, too, the very considerable increase in the price of mining supplies of every kind, allowances to employes on active service and the war levy of £500,000 per annum, are all additional burdens which have to be borne by the mines without any possibility of passing on a single penny to third parties. In other words, whereas the enhanced cost of production due to higher wages and price of materials, etc., is taken into consideration by the ordinary employer when fixing his selling price, and is therefore really borne by the consumer, all the heavy additional costs which I have just mentioned are borne by the mining companies in toto. It is well that it should be thoroughly appreciated that we are not making "war profits," but, per contra, that our mines are working under exceptionally arduous conditions in every way. As regards those officials and workers of the mines of our group who have gone on active service (and I may say that these now represent approximately 19 per cent of the total number of white men employed by the group) I regret to say that we have already received advices of casualties in the following instances:—

Killed (or Died).

Major C. J. French, Mercer and Charlton (Oversea); Pte. Herbert Wm. McCarthy, Mercer and Charlton (German East); Pte. Frank Cardigan Bosward, New Goch Gold Mine (Oversea); Pte. Wm. John Swartz, New Goch Gold Mine (German East); Pte. Wm. Henry Moyle, West Rand Consolidated (German East).

Wounded.

Gunner Cecil George Chittenden, New Goch Gold Mine (Oversea);

[illegible] Ferreira Main [illegible] New [illegible] M[illegible] German East [illegible]. Pte. Stu[illegible] [illegible] Roodepoort United (German [illegible]). Pte. John James Kintade Ross [illegible] [illegible] United (German East [illegible]). [illegible] Edward Peter Herbert Kelly [illegible] [illegible] Consolidated (Overseas). Pte. [illegible] [illegible] Pasley, Van Ry[illegible] Gold [illegible].

Missing.

Wm. [illegible] Francis [illegible] [illegible] Gold Mines (German East [illegible]) [illegible] Roux, West Rand Con[illegible] [illegible] (German East).

The Mines and South Africa.

[illegible] to-day aggravate the [illegible] [illegible] administration such as was [illegible] [illegible] concerned with every one of the [illegible] questions which arise in relation [illegible] administration of the mines ques[illegible] which, it seems to me, are increas[illegible] [illegible] the years go on both in their [illegible] and complexity. There are so [illegible] new factors nowadays in regard not [illegible] to technical and efficient work[illegible] the mines, but also those affecting [illegible] relations between ourselves and our [illegible] employes and native workmen. [illegible] [illegible] might add, with other sections of [illegible] [illegible] who, chiefly through ignorance [illegible] misunderstanding appear to regard [illegible] [illegible]istration of the mining companies [illegible] [illegible] objects for misapprehension [illegible] [illegible] suspicion. At the same time, these [illegible] people do not hesitate to declaim [illegible] any reasonable taxation placed on [illegible] shoulders as being in the highest [illegible] iniquitous, whilst they heartily [illegible] every suggestion to inflict additional burdens on the gold industry, [illegible] as admitted by Ministers, already [illegible] more than its fair share. The [illegible]neficial effect of the gold mines has [illegible] for many years, and still is, a far[illegible] reaching factor in practically every Pro[illegible] of South Africa. The mines spend [illegible] amounts of money directly or in[illegible]directly throughout the Union. The sup[illegible] which the mines purchase not only [illegible]tribute to the prosperity of all the [illegible] of the Union, but also by reason [illegible] Customs dues and railway rates con[illegible]stitute a considerable portion of the re[illegible]venue of the Government and so have made possible the laying down of new railway lines in some and the extension of existing lines in other parts of the country for the benefit of communities which apparently have little or no con[illegible]nection with this "university of crime"—the Witwatersrand—and would probably be surprised to learn that they have un[illegible]knowingly been benefited at our expense!

Local Critics.

For these people there is some excuse. [illegible] what about our local critics? It is one of the most extraordinary attributes of this population of the Rand that although almost every member of it is more or less dependent on the mining industry, nearly every one of them is [illegible] ready to heave a brick at it! And why? Our managers and officials, whether technical or financial, are just as straight and decent types of men as any other line of business could produce, and these are really the men who between them have nowadays most of the responsi[illegible] of running this great machine. [illegible] because in the old days a comparatively small number of men, most of whom [illegible], made great fortunes, as men [illegible] [illegible] early enough into a "good thing" such as this reef has proved to be [illegible] [illegible] and to do if they could keep [illegible] [illegible] and their money? If that be [illegible] [illegible] then all I can say is that [illegible] ground of complaint disappeared years [illegible] [illegible] the annual accounts of every finan[illegible] [illegible]poration for the past 10 years can [illegible] [illegible]tunately too well demonstrate. No[illegible] we find that money is much [illegible] [illegible] to make, but if anything easier [illegible] [illegible] than of old, and that good luck [illegible] [illegible] than good management must att[illegible] [illegible] ventures, in order to ensure a good [illegible] on the capital embarked.

Far East Rand.

[illegible] desire at this late stage of [illegible] [illegible] to enlarge on the controver[illegible] [illegible] of the far East Rand, but I [illegible] bound to say that the remark I have just made applies particularly to this district. I have never [illegible] all my life been a croaker [illegible] I would [illegible] to [illegible] [illegible] I have already [illegible] [illegible] [illegible] has been [illegible] [illegible] [illegible] of [illegible] extremely speculative [illegible] [illegible] the "far East" deposits, and I [illegible] [illegible] that those people who put [illegible] [illegible] [illegible] the general [illegible] of [illegible] [illegible] thousands of claims which are [illegible] [illegible] of will experience many dis[illegible] [illegible] in the years to come. The[illegible] undoubtedly some areas of a very [illegible] [illegible] nature which may be found [illegible] the very heavy capital expenditure [illegible] in their development, but there [illegible] others probably constituting the [illegible] [illegible] which will not be worth even a [illegible] of the money required to prove [illegible].

In conclusion it is my very pleasant duty [illegible] [illegible] to place on record the valu[illegible] [illegible] which have been rendered to [illegible] corporation and to your board by the [illegible] and technical officials of the head [illegible] Johannesburg, our mine managers [illegible] officials, and the staffs of our London [illegible] offices. I desire to add my own [illegible] testimony to the loyalty [illegible] I have met from all sides during [illegible] strenuous time which we have exper[illegible] [illegible] the course of the past year, and I [illegible] say that as a practical result of [illegible] I hope and believe that at the next [illegible] meeting of the corporation we shall [illegible] able to show a distinct improvement in [illegible] affairs.

The directors' report and the accounts were adopted. The retiring director, Mr. Martin Lenock, was re-elected, and the auditors, Messrs. Douglas, Low and Co., Johannesburg, and Mr. W. S. Ogle, London, were reappointed.

Reply to Critics.

Sir George Albu, referring to the recent criticisms of the group control of mines, said:—It has been the custom for many years past for some of our critics to hold up to reprobation what is generally known as the group system on these fields. I noticed in a comparatively recent article in a local newspaper that I was described as the champion of that system. Well, gentlemen, whilst I do not aspire to the honour which such a title would imply, I have no hesitation whatever in saying that in spite of—or rather because of—my long experience of the benefits of group control, I am absolutely convinced of its merits, so far as my own group is concerned. I do not suggest that the system has not at all times been abused, or that it is an ideally perfect one. But I have no hesitation in stating that it has far-reaching advantages, which easily outweigh its disadvantages. I am quite certain that but for the existence of the controlling houses this gold mining industry, which is of such supreme importance to South Africa and the Empire to-day, would have been a comparatively insignificant proposition. After all, it must be admitted that the mining houses have been responsible for the introduction of by far the largest pro[illegible]portion of the huge amount of capital ex[illegible]pended on these fields, without which the [illegible] would never have reached the pre[illegible]sent standard of output, which is without a parallel in any other part of the world. Whether the return to the shareholders concerned has been commensurate with their outlay is a debatable point.

Influx of Capital.

But so far as this community and this country are concerned, there can be no doubt whatever as to the benefits derived from the enormous influx of capital and the development and working of mining pro[illegible]positions, some of which have admittedly failed to benefit the investor, or capitalist, as he is generally and mostly erroneously described. Let us assume for a moment that each mining company here had been controlled by a board of directors, as in the case of most other commercial or in[illegible]dustrial concerns, with no recourse to a group or house. Is it reasonable to sup[illegible]pose that this particular board would not have been open to the same accusation as is to-day made against the controlling house of being the first in the field with inside knowledge of the mining operations of the company, and of therefore being in a posi[illegible]tion to profit thereby? On the other hand, take the history of almost every so-called independent mining company or syndicate, not only on the Witwatersrand, but else[illegible]where: what happens, almost universally, when the company in question [illegible] [illegible] out of the necessary funds to [illegible] [illegible] development or equipment, or when [illegible] [illegible] same falls on evil days through [illegible] [illegible]velopment or what may be a [illegible] [illegible] falling off in value which render [illegible] working inevitable unless a con[illegible] [illegible] amount of further capital be found? Do [illegible] directors find the large [illegible] [illegible]quired, or does the ordinary shareholder evince an ardent desire to proffer [illegible] assistance? No, in the great majority [illegible] [illegible] the property is shut down, [illegible] [illegible] and nothing more [illegible] [illegible] until it is perhaps bought for [illegible] by new parties and served up again under a new name and new auspices. [illegible] the other and existing alternative [illegible] mining house. In the first place [illegible] either provides or guarantees the large amount of working capital required nowa[illegible]days to develop and equip a gold mine on these fields, and by far the major portion of this capital has hitherto come from oversea, and has not been found by South African shareholders. Later on, so long as the proposition shows a reasonable pro[illegible]bability of eventually earning profits, even if only sometimes on a small scale, the house, if necessary, provides or guarantees the further issue of working capital re[illegible]quired to keep the concern from sinking into oblivion. Of course, there are excep[illegible]tions to this, as to every other rule. Some[illegible]times the controlling house may find that it has gone to the full length of its tether in making large advances to some of its subsidiary companies, which, owing to stagnant markets or other causes, it is un[illegible]able for the time being to recover, and so cannot extend similar advantages to others of its companies which for the same reasons are unable to obtain additional capital by means of further share issues. This, as you are aware, has happened in the in[illegible]stance of your corporation.

"Distinctly Beneficial."

But taking the question as a whole, the result of mining house control has been distinctly beneficial. There is hardly a single one of the subsidiary companies of this group which would be alive to-day but for the valuable assistance—monetary and otherwise—which we have rendered to them in the past. I should like to know who would have raised £350,000 for the acquisition of the additional claims for the New Goch in 1901—as we did; who would have subsequently lent that company over £500,000 in order to pay for its expenditure during the Boer War, shaft sinking and de[illegible]velopment later, and subsequently the doubling of the milling capacity? What "independent" board of directors would have advanced over £300,000 to the Aurora West for the completion of its development and equipment programme? And who could have been found, other than our[illegible]selves, to lend the Roodepoort United over £300,000, and to continue mining operations at an actual loss for approximately three years in succession? Take even a prosper[illegible]ous concern such as the Meyer and Charl[illegible]ton. When, some seven years ago, the then mining area of that company was prac[illegible]tically exhausted, we were able to pur[illegible]chase additional ground, which gave it a new lease of life even more successful than the past. Could an "independent" board have carried on negotiations for these claims, as we did, over a period of about 10 years, and subsequently acquire the new ground at half the price asked by the vendors, not by means of the funds owned by the Charlton Company, which were utterly insufficient, but by an under[illegible]taking on the part of your corporation to pay the purchase price whatever might be the result of the new issue of the Charlton shares made, under our guarantee again, to provide the necessary funds? I could give you other practical instances of the effect of the "group system" on bringing out new or supporting existing concerns for the benefit not only of shareholders, but the community as a whole, but I think those I have already detailed should be sufficient to make responsible and thinking people admit that, after all, there is something to be said on behalf of the mining houses, or at least one of them! There are additional advantages, such as economy and better efficiency in administration and technical supervision consequent on centralisation and co-ordination, which are fully recog[illegible]nised by those in a position to form an un[illegible]biassed judgment.

GENERAL MINING AND FINANCE CORPORATION, LIMITED.

(Incorporated in the Transvaal.)

REPORT OF THE DIRECTORS

For the Year ended 31st December, 1915.

Submitted to Shareholders at the Sixteenth Ordinary General Meeting, held on Tuesday, 4th July, 1916, at 11 o'clock in the forenoon, in the Board Room, General Mining Buildings, Main Street, Johannesburg.

To the Shareholders,

GENERAL MINING AND FINANCE CORPORATION, LTD.

Gentlemen,—Your Directors beg to submit their Report on the affairs of the Corporation for the year ended 31st December, 1915, together with the Balance Sheet and Profit and Loss Account at that date, and the Auditors' Report.

CAPITAL.

The Capital is £1,875,000, divided into 1,875,000 shares of £1 each, all issued and fully paid up, of which Nos. 1 to 1,000 are Founders' Shares.

ACCOUNTS.

The working profit for the year ended 31st December, 1915, after deducting administration expenses, interest, etc., amounted to	£17,416 10 0	
On the other hand, it has been deemed advisable to make the following provision, which has been debited to Profit and Loss Account:—		
Loss on Mining Ventures	2,309 8 10	
Leaving a balance (being profit for the year) carried to Balance Sheet of		£15,107 1 2

This has been deducted from the debit balance of £15,629 17s. 8d. brought forward from the previous year, leaving a total amount standing to the debit of Profit and Loss Account of £30,522 16s. 6d.

The Corporation's holdings of shares and debentures of other companies, which at the close of the previous year showed a depreciation (in the aggregate) of £971,973 5s. 8d. as compared with the market prices then ruling, reflect a total depreciation of £983,823 0s. 2d. if taken at the prices obtaining at the 31st December last. Your Directors desire to again point out that this depreciation does not represent a realised loss, but that any material improvement depends largely upon the re-financing of such of the companies under the Corporation's control as require additional working capital for the re-commencement and continued prosecution of mining operations.

ASSETS

The usual classification of assets is adopted, as under:

1. Shares and Debentures in gold-producing Main Reef Outcrop Companies under the management of the Corporation.
2. Shares and Debentures in Main Reef Deep Level Companies, partially developed or waiting development, under the management of the Corporation.
3. Shares in Mining, Estate, Land and Miscellaneous Companies and Syndicates.
4. Mining Properties.
5. Real Estate and Buildings in Johannesburg.

General Mining and Finance Corporation, Limited. continued.

MINING COMPANIES MANAGED BY THE CORPORATION

[illegible] portion of the share and debenture investments are mines under the management and control of the Corporation. These are as follows:—

Simmer & Jack Proprietary Mines; Aurora West United Gold Mining Co., Ltd.; Meyer and Charlton Gold Mining Co., Ltd.; New Kleinfontein Mines, Ltd.; Roodepoort United Main Reef G.M. Co.; Van Ryn Gold Mines Estate, Ltd.; West Rand Consolidated Mines, Ltd.

[illegible] Level Mines Proprietary Limited; Langlaagte Deep Gold Mining Co., Ltd.; Umbrella Consolidated Gold Mines, Ltd.; New State Areas Gold Mines, Ltd.; Rand Collieries, Ltd.

A short [illegible] of the operations for the past year of each of these companies follows:—

AURORA WEST UNITED GOLD MINING COMPANY, LTD.

During the past year this company crushed 172,500 tons of ore, yielding gold, etc., to the value of £209,525 3s. 11d., of which £67,410 11s. 11d. were absorbed by working expenditure, leaving profit on mining operations of £142,115 12s. These funds, with the addition of sundry revenue, were utilised in meeting the capital expenditure involved in new plant and machinery, and in the reduction of the company's liability to your Corporation, which now stands at £80,981 11s. 5d. The payable ore reserves at the end of the year amounted to 550,044 mining tons of fully developed ore of an average value of 5.5 dwts. per ton, and 88,500 tons of partially developed ore of an estimated value of 5.7 dwts. The new incline shaft, steel headgear and winding engine were put into commission towards the end of the year.

MEYER AND CHARLTON GOLD MINING COMPANY, LTD.

This company treated 176,410 tons of ore during the past year, yielding gold, etc., valued at £191,726 13s. 7d., at a total working cost of £163,196 11s. 10d. With the inclusion of sundry revenue, amounting to £13,091 15s. 9d., the gross profit was £251,621 17s. 5d., which, added to the unappropriated profit brought forward from the previous year, gave a total available profit of £440,938 10s. The Government's share (Profits Tax, War Levy, and percentage of net produce in respect of Undermining Rights leased) of the profit for 1915 was £55,670 19s. 11d., dividends equal to 80 per cent. for the year absorbed £160,000, and a special bonus distribution was made of 10s. per share out of accumulated profits amounting to £100,000. After providing for assessments in respect of Miners' Phthisis Compensation, etc., a balance of £122,478 2s. 1d. was carried forward to the current year. The dividends and bonuses distributed by this company since its inception to the end of the past year amount in the aggregate to £1,095,300 19s., representing 1,375 per cent. on the capital issued from time to time. The ore reserves at the 31st December last consisted of 185,246 mining tons of fully developed ore of an average value of 12.56 dwts. per ton, and 46,566 tons of partially developed ore of an estimated value of 19.87 dwts.; these highly valuable reserves stand in the company's books for nil, having been paid for out of past profits.

NEW GOLD GOLD MINES, LTD.

The operations of this company for 1915 resulted in the crushing of 364,270 tons of ore for a total yield to the value of £346,269 17s. 3d. Working expenditure amounted to £254,913 13s. 6d., leaving a working profit of £91,356 3s. 9d. The gross profit, including sundry revenue, was £95,125 4s. 2d., which, with the addition of the [illegible]ted profit of £126,362 10s. 10d. [illegible]t forward from the [illegible]s year, gave an available balance of £221,488 1s. After [illegible]ding for Union and English Government Taxes, Phthisis Compensation, Interest on Debentures, etc., the profit was appropriated as to £112,475 in the redemption of the whole of the outstanding Debenture debt, £1,410 10s. on capital expenditure, £55,000 was distributed in two dividends of 5 per cent. each and a balance of £52,023 16s. 4d. was carried forward to the new year. The ore reserves at the 31st December last were 668,000 tons of fully developed ore of an average value of 5.51 dwts. per ton, and 80,963 tons of partially developed ore of an average value of 4.68 dwts. per ton.

ROODEPOORT UNITED MAIN REEF GOLD MINING COMPANY, LTD.

108,896 tons of ore were crushed during the past year, with a resultant yield of gold, etc., to the value of £370,758, whilst working costs aggregated £353,499 4s. 11d., leaving a working profit of £17,258 15s. 1d., thus again reflecting the small margin of revenue over expenditure referred to in the previous annual report of your Directors. On the other hand, the ore reserves at the 31st December last, of 720,309 tons of fully developed ore of an average value of 5.90 dwts. per ton, and 148,114 tons of partially developed ore of an estimated value of 5.17 dwts., show a substantial increase over the reserves at the close of the preceding year. Moreover, the general outlook of the development work now proceeding is much more promising than has been the case for some years past, and it is, therefore, confidently anticipated that the milling returns for the new year (1916) will exhibit a very considerable improvement.

VAN RYN GOLD MINES ESTATE, LTD.

Milling operations for the year 1915 show that 160,550 tons of ore were treated, yielding gold, etc., to the value of £564,185, with working expenditure amounting to £334,507, thus leaving a working profit of £229,678. For the same period two dividends, of 22½ per cent. and 17½ per cent. respectively (making 40 per cent. for the year), were declared. This company has now paid out in dividends £2,232,000, equivalent to 160 per cent. on its issued capital. The payable ore reserves, which at the 31st December last were estimated at 1,771,903 tons fully developed of an average value of 6.32 dwts. per ton, stand in the company's books for nil, having been paid for out of past profits.

WEST RAND CONSOLIDATED MINES, LTD.

During the past year this company crushed 369,400 tons of ore, yielding gold, etc., valued at £448,730 15s. 3d.; working costs amounted in the aggregate to £355,200 10s. 11d., leaving a working profit of £93,530 4s. 4d., or an increase of £27,471 11s. 6d. over that for the previous year. The tonnage treated was 58,650 tons above the total for 1914, and the working costs show a further decrease of 8d. per ton. The ore reserves at the close of the year consisted of 1,838,380 mining tons of fully developed payable ore of an average value of 6.1 dwts. per ton, and 255,793 tons of partially developed ore of an estimated value of 6.4 dwts.; in addition, there were 296,000 tons of fully developed and 255,000 tons of partially developed ore, for which a final value cannot as yet be assigned, but of which a large proportion is likely to prove payable. The fully developed payable reserves show an increase of approximately 385,600 tons over those at the 31st December, 1914, and the development position is now such as to amply justify a substantial increase in the treatment capacity of the reduction works. Having regard, however, to the difficulty of obtaining at the present time the requisite additional plant and machinery, except at heavy increased cost and with indefinite conditions of delivery, it has been considered advisable to postpone placing orders until more normal circumstances obtain.

General Mining and Finance Corporation, Limited. – continued.

CINDERELLA CONSOLIDATED GOLD MINES, LTD.

The property of this company, in which your Corporation is so largely interested, remains closed down until such time as it is possible to obtain the funds necessary for its reopening and development on a scale commensurate with the considerable mining area of 2,100 reef claims held. It should be borne in mind that, from a technical point of view, a re-commencement of active operations would be rendered easy by reason of the extensive shaft-sinking and development work already carried out before their suspension at the end of 1913.

RAND COLLIERIES, LTD.

The property of this company, which includes the freehold of the central portion of the farm Witpoort (in the Far East Rand), with coal rights over 5,910 acres and gold mining rights equivalent to 828.5 claims, also remains closed down for want of the requisite capital to re-start development operations.

NEW STEYN ESTATE GOLD MINES, LTD.

This company owns deep level ground immediately south of the Roodepoort mines equivalent to 1,022 mining claims, on which up to the present no work has been initiated, but which, owing to their favourable situation, should eventually come into the sphere of active operations.

MISCELLANEOUS COMPANIES.

Shares are also held by your Corporation in other mining, estate, financial and miscellaneous companies; the book value of these at the 31st December last was £211,076 1s. 8d.

MINING PROPERTIES AND REAL ESTATE, ETC.

The Corporation holds various mining properties, real estate and house property, etc., standing in the Balance Sheet at £236,533 3s. 10d. They include 564 claims in different sections of the Witwatersrand. The real estate and house properties are all situate in Johannesburg and produce fair rentals; the Reserve Account against possible loss in this connection still remains at £70,000.

GENERAL.

As foreshadowed in their report for 1914, your Directors have mainly concerned themselves during the past year with the affairs of the producing mines under the control of the Corporation. The subsidiary companies coming under this description have as a whole fully maintained the pre-war scale of operations and have earned normal profits, notwithstanding the constantly increasing price of almost every kind of mining supplies and the increased allowances made to employees on active service; the latter is now equivalent to over 16 per cent. of the total European employees of the mines of this Group. The outstanding feature of the returns of our gold producing mines is the recovery towards the end of the year of the Roodepoort United, the prospects of which have improved to a very material degree. Your Directors refer special reference to this aspect because of the importance to the Corporation of the resuscitation of that property, in view both of the Corporation's large shareholding and the heavy indebtedness of the company of over £300,000 to the Corporation in respect of loans made in the past. As pointed out in previous sections of this Report, it has been impossible during the past year to formulate any practical schemes with the view of obtaining the additional funds required for re-commencing active operations at the Cinderella Consolidated and Rand Collieries. As shareholders are aware, the Corporation's interests in these two companies are responsible not only for the locking up of a considerable amount of capital, but also for by far the greater portion of the depreciation in the share investments noted on the accompanying Balance Sheet.

During the year under review your Corporation has entered into an agreement whereunder the Corporation has the option and right to provide working capital for the Rand Klipfontein Estates, Ltd., in the event of the boring operations now being undertaken by the Corporation disclosing satisfactory reef conditions and values on the farm Rietfontein No. 327, adjoining the Daggafontein Company's property on the Far East Rand.

DIRECTORS.

In terms of the Articles of Association one of your Directors, Mr. Martin Luebeck, retires, but, being eligible, offers himself for re-election.

AUDITORS.

The Auditors, Messrs. Douglas, Low and Co., in Johannesburg, and Messrs. William S. Ogle and Co., in London, also retire, and offer themselves for re-election. You will be requested to fix their remuneration for the past year.

GEORGE ALBU,
Chairman.

Johannesburg,
20th April, 1916.

PROFIT AND LOSS ACCOUNT for the Year ended 31st December, 1915.

Dr.		Cr.	
To Administration Expenses in Johannesburg, London, Berlin and Paris (including Managing Directors' Fees, Salaries of Staff and Engineering Department, Rents, Stationery, Printing, Advertising, Travelling Expenses, Cable and General Expenses), less amounts received from other Companies	£10,653 19 1	By Profits on Stocks, Shares, etc., realised	£2,243 1 10
,, Interest	38,067 6 1	,, Sundry Revenue in respect of Dividends, Transfer Fees, Commissions, Rent of House Property, etc.	£64,893 13 4
,, Directors' Fees	1,000 0 0		
,, Losses on Mining Ventures	2,369 8 10		
,, Balance, being Profit for year taken to Balance Sheet	15,167 1 2		
	£67,137 15 2		£67,137 15 2

General Mining and Finance Corporation, Limited.—continued.

BALANCE SHEET AT 31st DECEMBER, 1915.

To				By	
[illegible] Account [illegible]				[illegible] Shares [illegible] under Cost	
[illegible] Reserve Stock at 31st December, 1914—				In Companies under the Management of the Corporation	£1,235,365 0 0
£574,000 Shares of £1 each	£574,000 0 0			In other Companies	211,076 1 8
1,000 Founders' Shares of £1 each	1 0 0				1,446,441 2
		£1,875,000	0 0	Debentures of Public Companies, etc.	348,573 19 7
Debentures [illegible]		115,670 18 7			£1,795,014 1 7
Bills Payable		60 2 6			
Creditors for Stock bought but not yet delivered		7,436 18 7		Note.—The above Assets, taken at the Market Prices of 31st December, 1915, where there are published quotations, and at the Directors' valuations in cases where there are no such quotations, show a depreciation of £983,823 0s. 2d.	
Sundry Creditors		720,794 0 1			
House Property Reserve Account		70,000 0 0		Mining Properties, Claim Holdings, Real Estate and House Property in Johannesburg, and other Assets	2,753 5 10
Carrying at Liability on Issued Capital on Shares and Investments	£7,531 5 0			Office Furniture—	
				Johannesburg, London, Berlin and Paris	6 6 0
				Advances against Securities (including Stocks and Shares taken in)	34,878 19 11
				Sundry Debtors (including advances to Mining and other Companies)	585,643 2 2
				Debtors for Stock Sold but not yet Delivered	986 15 10
				Cash—	
				At Bankers and in Hand	36,652 19 3
				£58,000 British Treasury Bills	57,728 14 11
					94,381 14 2
				Profit and Loss Account—	
				Balance at 31st December, 1914	15,629 17 8
				Less Balance from Profit and Loss Account for year 1915	15,107 1 2
					30,522 16 6
		£2,797,962	0 0		£2,797,962 0 0

Signed) H. W. DALTON, Secretary.

(Signed) GEORGE ALBU, Chairman.

(Signed) ARTHUR FRENCH, Director.

To the Shareholders of the
GENERAL MINING AND FINANCE CORPORATION, LTD.

We report that we have examined the above Balance Sheet with the Books and Vouchers of the Corporation in Johannesburg, and have obtained all the information and explanations we have required as Auditors. The Accounts received from London, incorporated therein, are duly signed by the London Auditors, Messrs. William S. Ogle and Co., Chartered Accountants, who also certify that they have verified such of the securities as at 31st December, 1915, were in London and Paris, those held in Johannesburg at that date having been verified by us. Owing to the War in Europe, neither the London Auditors nor ourselves have been able to verify the Corporation's shareholdings in two companies, situate in Russia and Belgium, the Corporation's share certificates in these concerns being held, on its behalf, by Banks at Petrograd and Brussels respectively. The assets and liabilities of the Berlin office of the Corporation, included in the above Balance Sheet (plus provision for estimated expenditure to 31st December, 1915, and, owing to the War, unsupported by audited accounts from Berlin. The whole of the shares and debentures appear in the books at or under cost, and attention is drawn to a note on the Balance Sheet, indicating the depreciation in values at the 31st December, 1915. Subject to these remarks, we state that, in our opinion, such Balance Sheet is properly drawn up so as to exhibit a true and correct view of the Corporation's affairs, according to the best of our information and the explanations given to us, and as shown by the books of the Corporation.

(Signed) DOUGLAS, LOW AND CO.
(Incorporated Accountants),
Auditors.

Johannesburg,
24th March, 1916.

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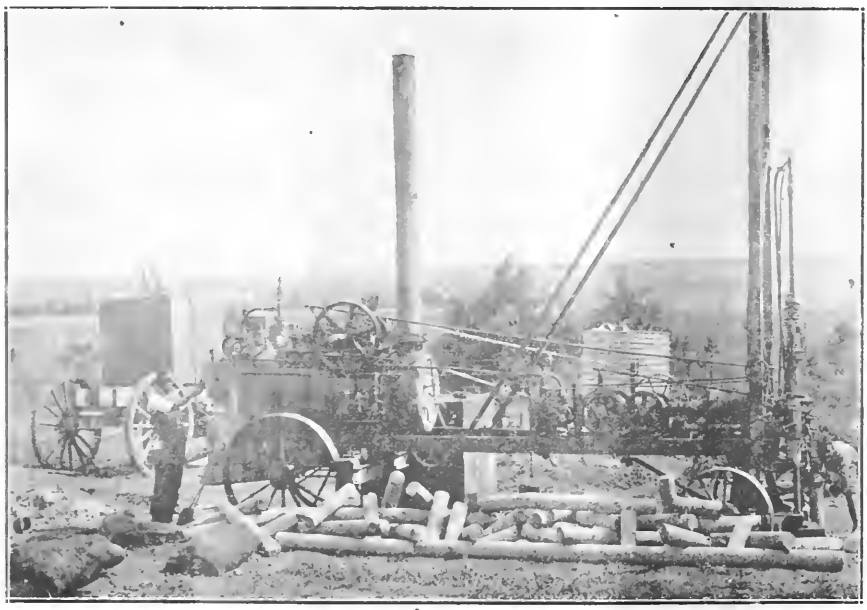

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